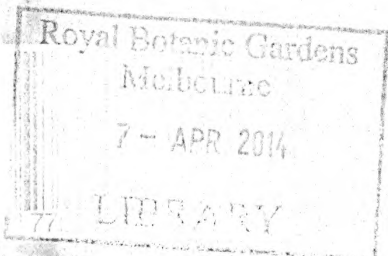


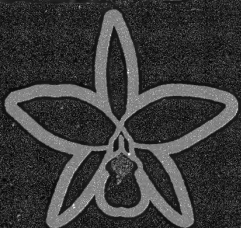
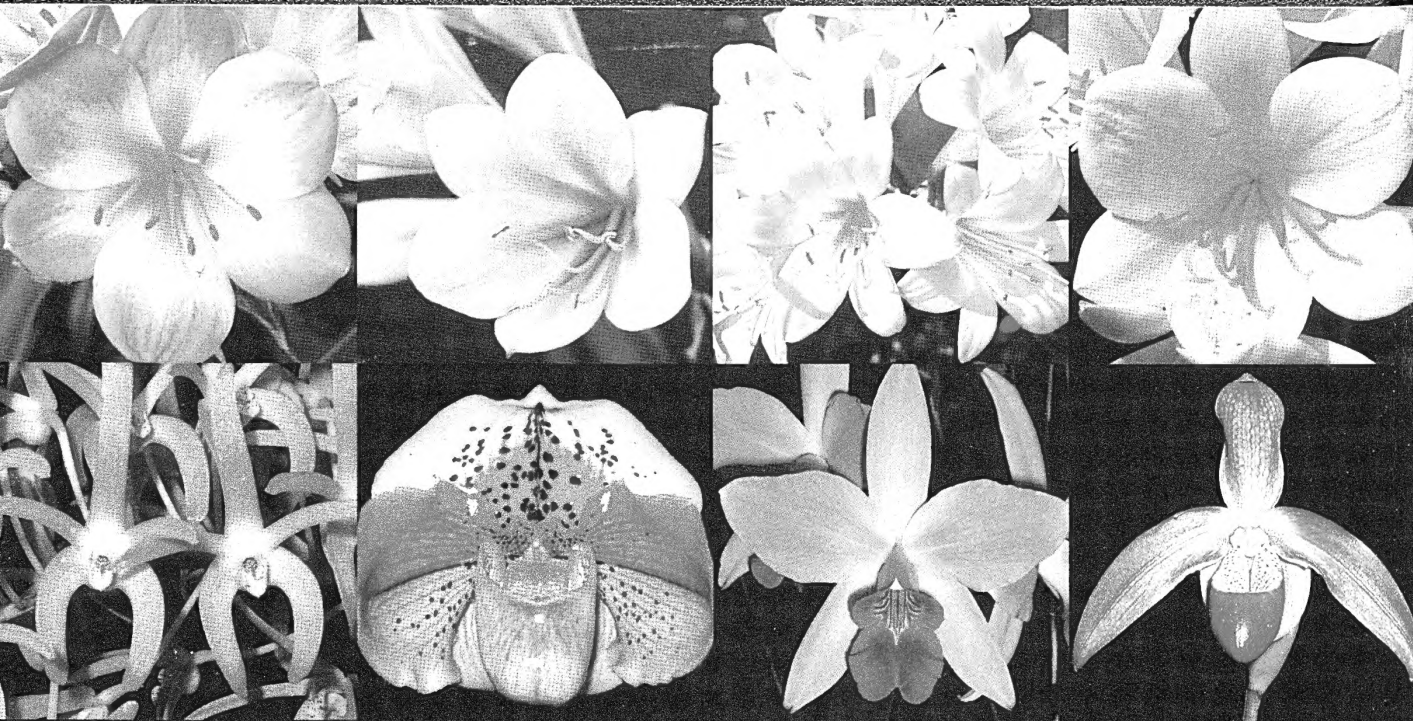
APRIL – MAY 2014
\$9.95
R.R.P.
(includes GST)

Australian Orchid Review



VOLUME 79 – No. 2

www.australianorchidreview.com.au



HILLS DISTRICT ORCHIDS

Winter Open Day Sunday 27 July 2014

@183 Windsor Road Northmead 2152 NSW

9am til 4pm (please park in Mary Street or Windermere Avenue)

*Heaps of flowering orchids, rare species and unusual plants for sale,
as well as a full range of orchid related supplies and new and exclusive
Clivia miniata seedlings in a full range of colours.*

Including regular vendors:

Tinonee Orchid Nursery and Macquarie Native Orchids

Phone: David Banks on 0412 123 036

E-mail: david@hillsdistrictorchids.com

HDO Open Days are held 4 times a year:

Autumn: Last Sunday in February (22 February 2015)

Winter: Last Sunday in July (27 July 2014)

Spring: Last Sunday in September (28 September 2014)

Summer: First Sunday in December (7 December 2014)

www.hillsdistrictorchids.com

From the Editor's Desk

The winners in the various categories for the Victorian Orchids of the Year for 2013 were recently announced and are featured in this issue with commentary provided by Meryl Early. This is a wonderful initiative from the Orchid Societies Council of Victoria (OSCOV) which truly rewards exceptionally well grown and quality orchids and their growers. Other states, and even the national body, could learn a lot from OSCOV in this positive way they are promoting orchids.

Lovers of Australian terrestrial orchids are again well catered for. David Jones and Chris French describe three new West Australian greenhood species from the genus *Pterostylis*. In a second paper, David Jones along with Mark Clements describe a new and distinctive *Acianthus* species from the New South Wales – Queensland Border Ranges.

I discuss a seldom seen *Epigeneium* species from Vietnam, plus a rare colour form of the fragrant "Coconut Orchid" *Maxillaria tenuifolia* from Mexico.

Roy and Lee Neale from Leroy Orchids in New Zealand talk about their recent interest and successes with improved reed-stem *Epidendrum* hybrids. They come in a much wider colour range these days, with better shape and size than the standard garden variety "crucifix orchids" that many are familiar with.

It's nice to see Guido Braem writing again for the AOR. In this issue he discusses the spectacular *Phragmipedium popowii* and related species with which it has been confused.

I sadly report the passing of two prominent orchid growers from California, USA, who shared so much knowledge and plants with the orchid fraternity. Howard Gunn was one of the finest orchid growers I had ever met, with one of the best private collections of species and interesting hybrids. Howard, who passed away on 27th October 2013, had a special interest in slipper orchids and made many trips around the globe with his wife Joan to orchid conferences and to see plants growing in the wild. Gerardus Staal appreciated mainstream orchid genera but had a special interest in the eclectic and the unusual. He specialised in hybridising within the genus *Masdevallia*, but excelled in making interesting and unusual intergeneric and intersectional orchid hybrids. He was able to achieve some amazing combinations. Gerardus passed away at home on 10th February 2014. Both gentlemen and friends were 88 years of age, and will be missed by their families and vast orchid friendships from around the world.

We also note the untimely passing of Tony Rodgers on 4th January 2014, at 64. Tony was an avid naturalist who had a special interest in photographing our native terrestrial orchids in the wild. A number of his world class photographs have appeared in recent issues of the AOR.

Remember you can renew or extend your subscriptions to the *Australian Orchid Review* on our secure website at www.australianorchidreview.com.au

You can also visit our page on Facebook.

David Banks
Australian Orchid Review
david@hillsdistrictorchids.com



APRIL – MAY 2014

Volume 79 – No. 2 Royal Botanic Gardens
Melbourne

Contents

7 – APR 2014

Features:

Victorian Orchids of the Year 2013	Meryl Early 2
Rare colour form of <i>Maxillaria tenuifolia</i>	David Banks 14
Growing Orchids in the Garden	David Banks 16
<i>Cymbidium</i> Magic Devon 'Maise'	18
New Species in the <i>Pterostylis nana</i> R.Br. complex (Orchidaceae) from Western Australia - 1	David L. Jones and Christopher J. French 19
Unusual colour form of <i>Miltoniopsis vexillaria</i>	Andy Easton 28
<i>Epigeneium chapaense</i> – a rarely seen miniature orchid species from Vietnam	David Banks 29
Reed-Stemmed <i>Epidendrums</i>	Roy and Lee Neale 33
<i>Acianthus saxatilis</i> (Diurideae: Orchidaceae), a new rare species from the Border Ranges region of eastern Australia	David L. Jones and Mark A. Clements 41
The Enigmatic (?) Case of the Most Beautiful <i>Phragmipedium popowii</i>	Prof. Dr. Guido J. Braem 49
<i>Miltassia</i> Golden Spider	Sam Cowie 63

Regular Features:

From the Editor's Desk	1
Mail Order Bookshop	59
Advertiser's Index	64
2014 Orchid Events – What's On!	64

Editorial copy:

Articles for publication and consideration should be sent to:

AOR Editor, David P. Banks, 39 Carole Street, Seven Hills, NSW 2147
Email: david@hillsdistrictorchids.com

All other correspondence to:

AOR Publisher, Hills Orchid Publishing Pty Ltd, PO Box 4812, North Rocks, NSW 2151
☎ 0433 422 792

Advertisers:

Deadline for advertising copy for the

June – July 2014 issue is Monday, 28 April, 2014

All advertising bookings and enquiries should be directed to:

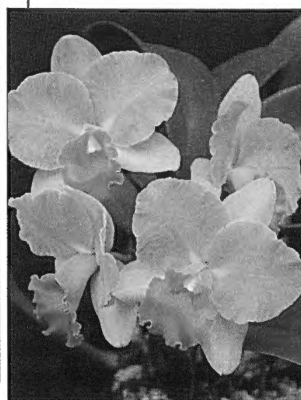
Caitlin Hoolahan ☎ 0433 422 792 Fax: (02) 9221 4242 or

Email: sales@australianorchidreview.com.au or

David Banks ☎ 0412 123 036 Email: david@hillsdistrictorchids.com

Subscriptions:

See page 61 for Subscription information



Cover Shot

***Sophrocattleya* Royal Beau
'Stanley' HCC/OSCOV**

shown and photographed
by Michael Coker, featured
in the 2013 Victorian Orchids
of the Year.

Phragmipedium caudatum 'Charlotte'
AM/OSCOV
was also Victorian Any Other
Species Orchid of the Year
- The Gerald McCraith Award.
Photo: Dieter Weise



Victorian Orchids of the Year 2013

by Meryl Early

The Orchid Societies Council of Victoria (OSCOV) has conducted its 21st annual Victorian Orchids of the Year competition. Digital pictures of all orchids that have received OSCOV awards in the current year are considered, together with any others submitted by Victorian growers. Success in this competition relies not only on growing an orchid of award quality but also on taking photographs of a similar standard. As a consequence, those orchids with the highest awards do not necessarily win this competition. In 2013, a total of 62 OSCOV awards were granted (40 quality awards, 3 Awards of Distinction, 12 Cultural Certificates, 5 Certificates of Botanical Merit/Recognition). Sixteen growers also entered images of plants that had done well at their meetings or shows. The OSCOV Judging Panel met in February 2014, first to select the winners in the various categories, and then to

decide the overall winner. The results of the Judges' adjudications are as follows:

The **Victorian Orchid of the Year for 2013** (sponsored by OSCOV) was *Phragmipedium caudatum* 'Charlotte' AM/OSCOV, grown by Dieter and Astrid Weise of Wantirna. This well presented orchid also won **Victorian Species of the Year – The Gerald McCraith Award** (sponsored by the Orchid Species Society of Victoria).

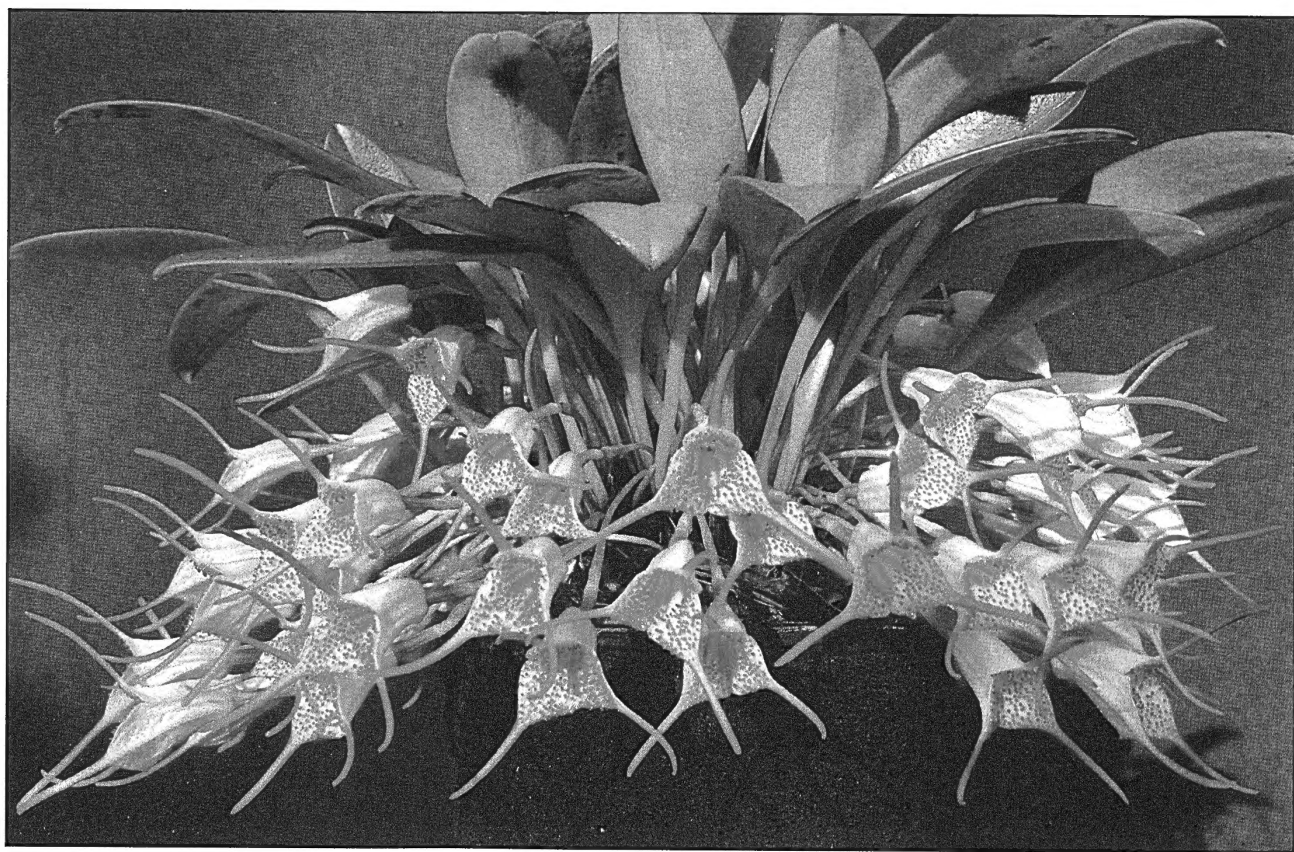
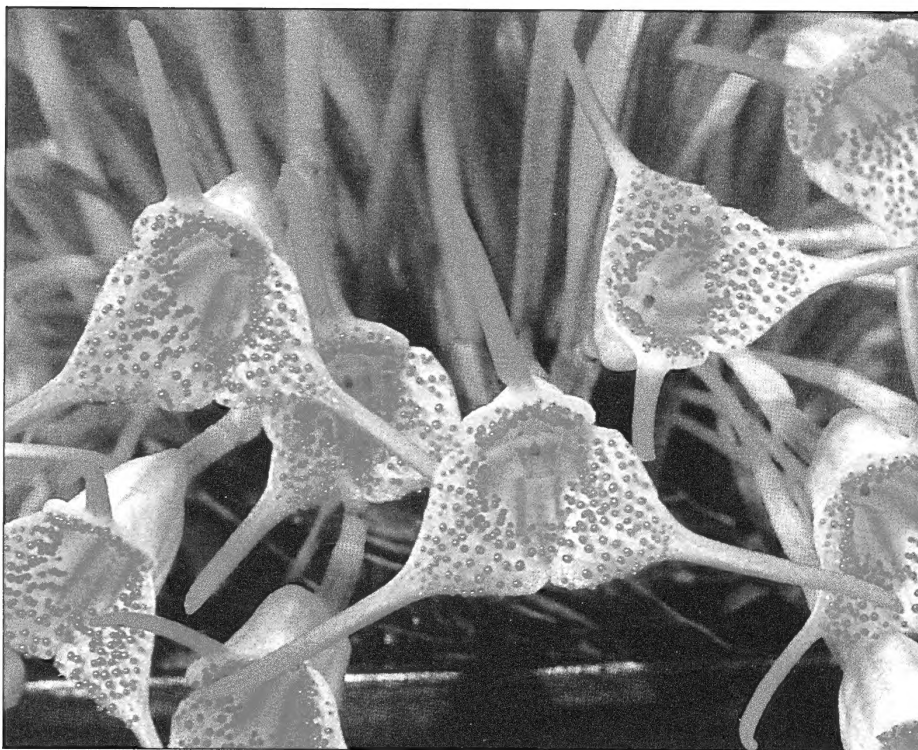
As the 'cultured' orchid section has been keenly contested, it was decided to separate these into Best Cultured Hybrid and the Best Cultured Species. The **Victorian Best Cultured Hybrid of the Year** (sponsored by Berwick Orchid Society) went to Neil and Fay Allison of Drouin with their specimen plant *Dockrillia* Phil's Delight 'Neerim' CC/OSCOV. Marita Anderson and Chris Waterman of Jeeralang Junction



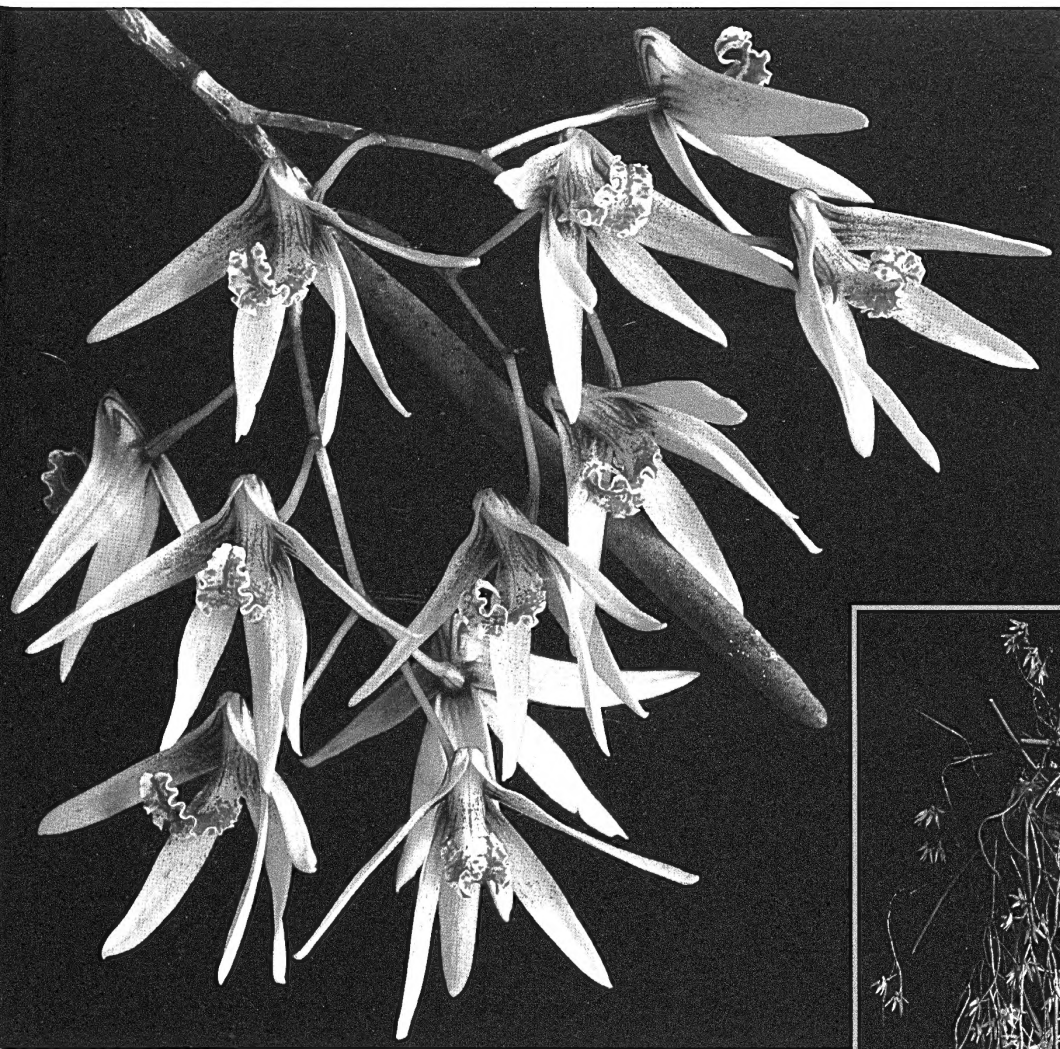
The Victorian Orchid
of the Year for 2013 was
Phragmipedium caudatum
'Charlotte' AM/OSCOV,
grown by Dieter Weise
of Wantirna.
Photo: Dieter Weise

won the **Victorian Best Cultured Species of the Year** (sponsored by the Maroondah Orchid Society) and will also receive the OSCOV-sponsored Gunter Haar Memorial Trophy (a large framed photograph of their orchid and an OSCOV silver medallion) for winning the **Victorian Best Cultural Orchid of the Year** with their spectacular specimen plant of *Masdevallia glandulosa* 'Tutu' CC/OSCOV. A total of 12 Cultural Certificates were granted during 2013. All trophies will be presented at the dinner to be held in conjunction with the OSCOV's 'Melbourne Orchid Spectacular' Show at the KCC Park, 655 Westernport Highway (Skye) on 22nd to 24th August 2014. The winners of all other categories will receive smaller framed photographic prints of their orchids and OSCOV medallions at this OSCOV Dinner on Saturday 23rd August 2014.

► *Masdevallia glandulosa* 'Tutu' CC/OSCOV. Photo: Marita Anderson



▲ The **Gunter Haar Award** for the **Victorian Best Cultural Award of the Year** went to Marita Anderson and Chris Waterman of Jeeralang Junction (eastern Victoria) who were delighted to win the **Victorian Best Cultured Species of the Year** with their specimen plant of *Masdevallia glandulosa* 'Tutu' CC/OSCOV. Photo: Marita Anderson.



◀ *Dockrillia Phil's Delight 'Neerim'* CC/OSCOV.
Photo: David Piko

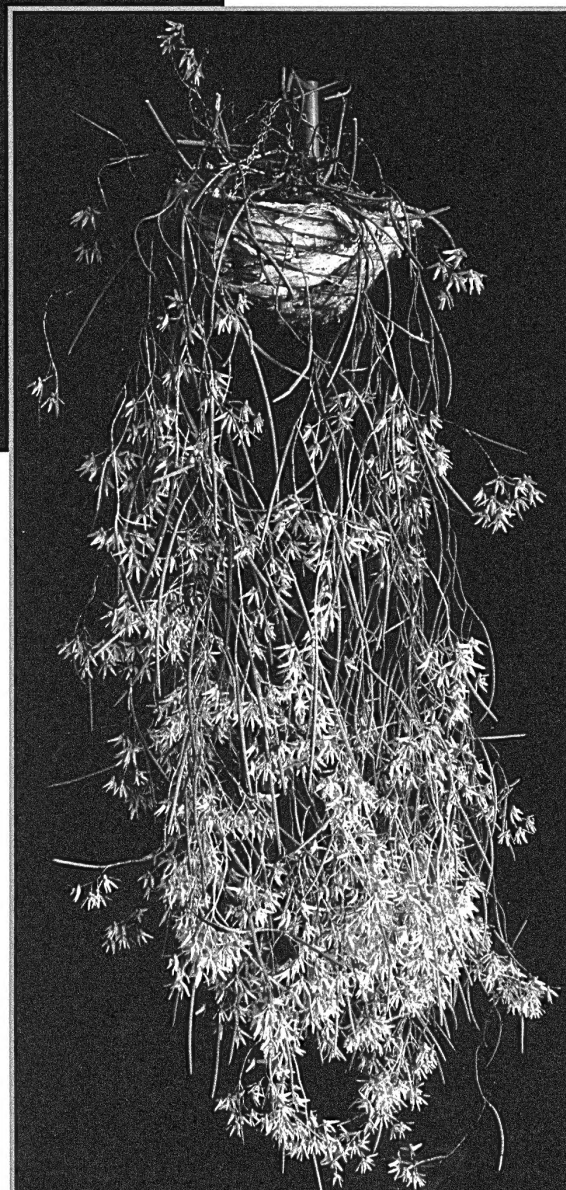
▼ Neil and Fay Allison of Drouin won **The Best Cultured Hybrid of the year** *Dockrillia Phil's Delight 'Neerim'* CC/OSCOV.
Photo: David Piko

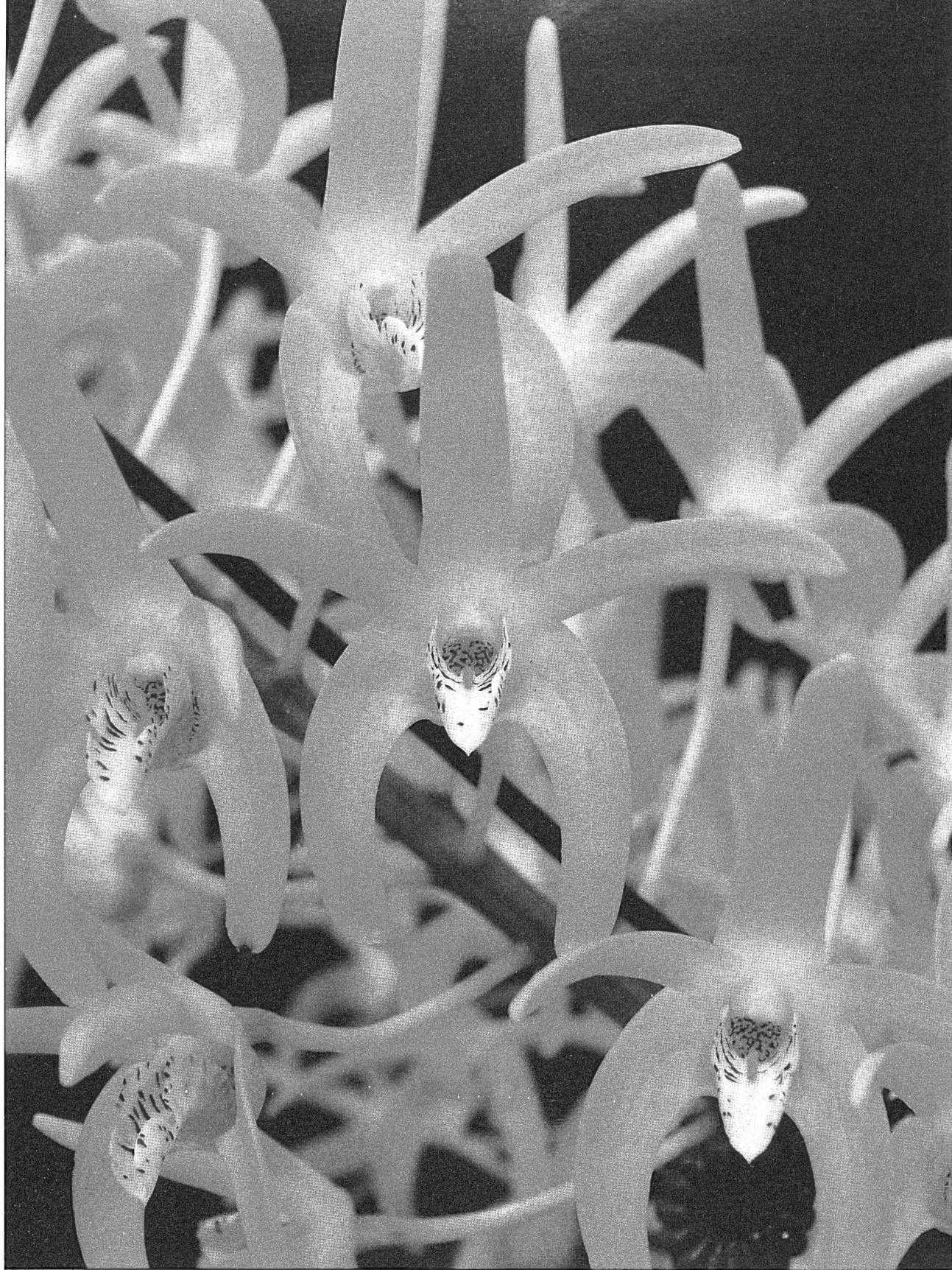
The **Victorian Australian Native Orchid Species of the Year** (sponsored by the Yarra Valley Orchid Society) was *Dendrobium speciosum* 'Sun Shower' HCC/OSCOV, grown by Peter and Margaret Miller of The Hanging Garden. *Dendrobium* Tyabb, grown by John and Barbara Welsh of Stawell was **Victorian Australian Native Orchid Hybrid of the Year** (sponsored by the Mornington Peninsula Orchid Society). This is one of the rare cases where the winner of a particular category had not received an OSCOV award this year, although the judges were unaware of this fact during judging (at the time of judging the nature of any awards and all cultivar names are withheld, so that the judges' decisions are based solely on the merit of the entries as shown by their photographs).

Victorian Paphiopedilum Hybrid of the Year (sponsored by the Ballarat Orchid Society) was *Paphiopedilum* Black Spider 'Mildura' HCC/OSCOV, grown by Andrew Francis and John Martin of Castle Creek Orchids. This plant also won the **Victorian Seedling of the Year – The Harold and Florence Coker Award** sponsored by Frances and Julian Coker.

Andy Tran of Templestowe won the **Victorian Cymbidium of the Year** (sponsored by the Cymbidium Orchid Society of Victoria) with *Cymbidium* Flaming Comet 'Brownie' HCC/OSCOV.

Marita Anderson and Chris Waterman of Jeeralang Junction with their plant *Masdevallia* Carnival 'Jester' HCC/OSCOV won the **Victorian Masdevallia of the Year** (sponsored by Warrnambool and District Orchid society).





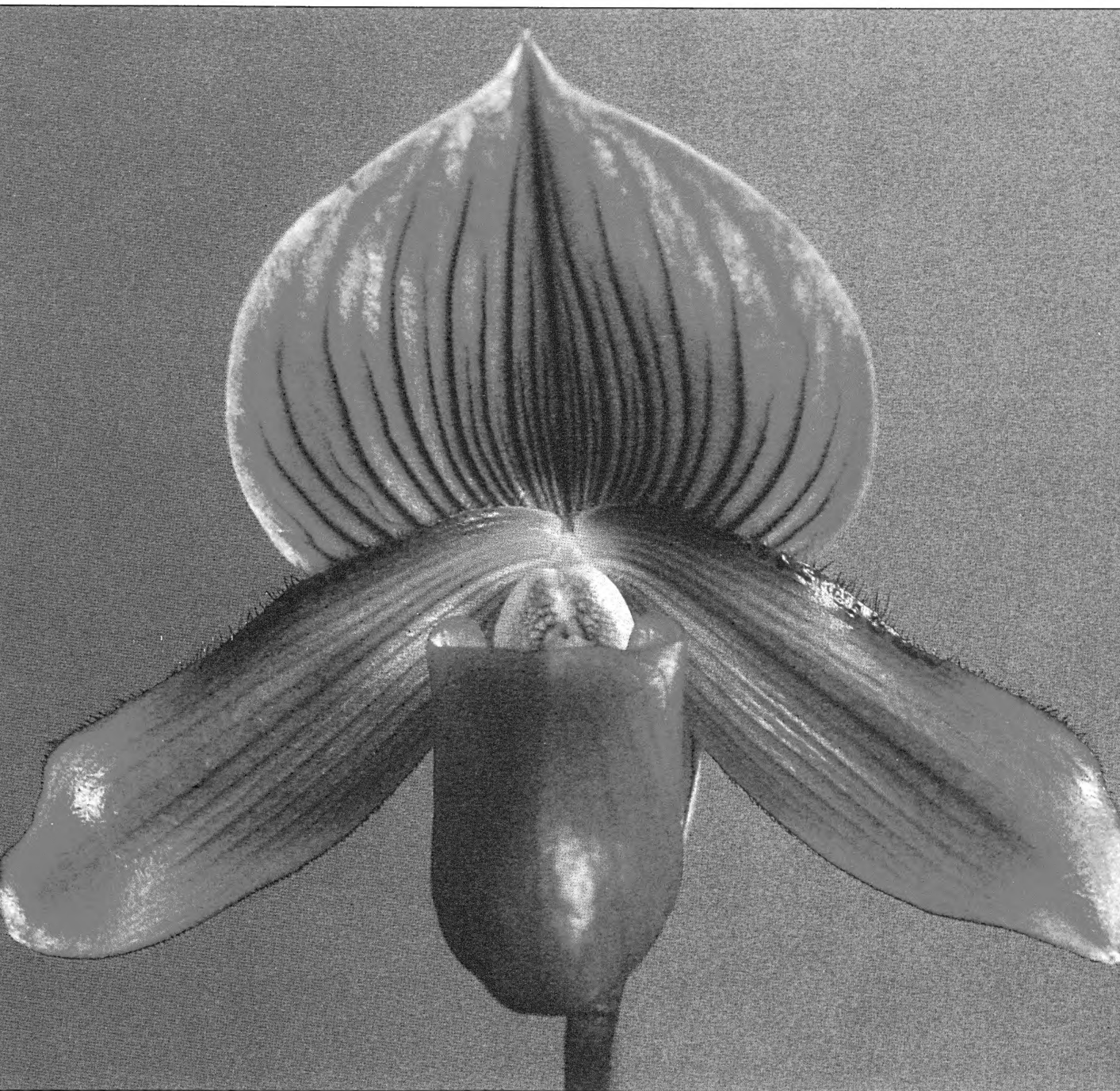
▲ Victorian Australian Native Species of the Year was *Dendrobium speciosum* 'Sun Shower' HCC/OSCOV, grown by Peter and Margaret Miller of The Hanging Garden. Photo: Brendan Larkin



▲ The **Victorian Australian Native Hybrid of the Year** was the plant of *Dendrobium Tyabb* grown by John and Barbara Welsh of Stawell. Photo: Michael Matthews

▼ *Dendrobium Tyabb* Photo: Michael Matthews





▲ **Victorian Paphiopedilum Hybrid of the Year**, grown by Andrew Francis and John Martin of Castle Creek Orchids, was *Paphiopedilum Black Spider 'Mildura'* HCC/OSCOV. It also won the **Victorian Seedling of the Year – The Harold and Florence Coker Award**. *Photo: John Martin*



▲ Marita Anderson and Chris Waterman of Jeeralang Junction (eastern Victoria) won **Victorian Masdevallia of the Year** with *Masdevallia* Carnival 'Jester' HCC/OSCOV.

Photo: Marita Anderson



◀ **Victorian Cymbidium of the Year** was won by Andy Tran of Templestowe with the plant that he hybridised *Cymbidium* Flaming Comet 'Brownie' HCC/OSCOV.

Photo: Andy Tran

ORCHID, LANDSCAPING & HORTICULTURAL COURSES, DISTANCE EDUCATION

Short courses, Certificates, Diplomas

Over 400 courses including:

Cut Flower Orchids, Hydroponics, Tissue Culture, Orchid Culture, Plant Varieties, Landscaping and more

Study by CD, online, or by traditional correspondence. Highly qualified tutors.

FREE 87 page handbook

Phone: 07 5562 1088

**Websites: www.acs.edu.au www.hortcourses.com
P.O. Box 2092, Nerang MDC, Qld 4211**

The **Victorian Laeliinea of the Year** (sponsored by the Mid-Murray Orchid Club) was *Soprocattleya* Royal Beau 'Stanley' HCC/OSCOV owned by Michael Coker. He also presented *Paphiopedilum henryanum* 'Arbor' AM/OSCOV which won the **Victorian Paphiopedilum Species of the Year** (sponsored by the Stawell Orchid Society). Another plant of Michael's was *Phragmipedium* Inca Rose 'Alexandra' HCC/OSCOV won the **Victorian Any Other Hybrid of the Year** (sponsored by the North East Melbourne Orchid Society).

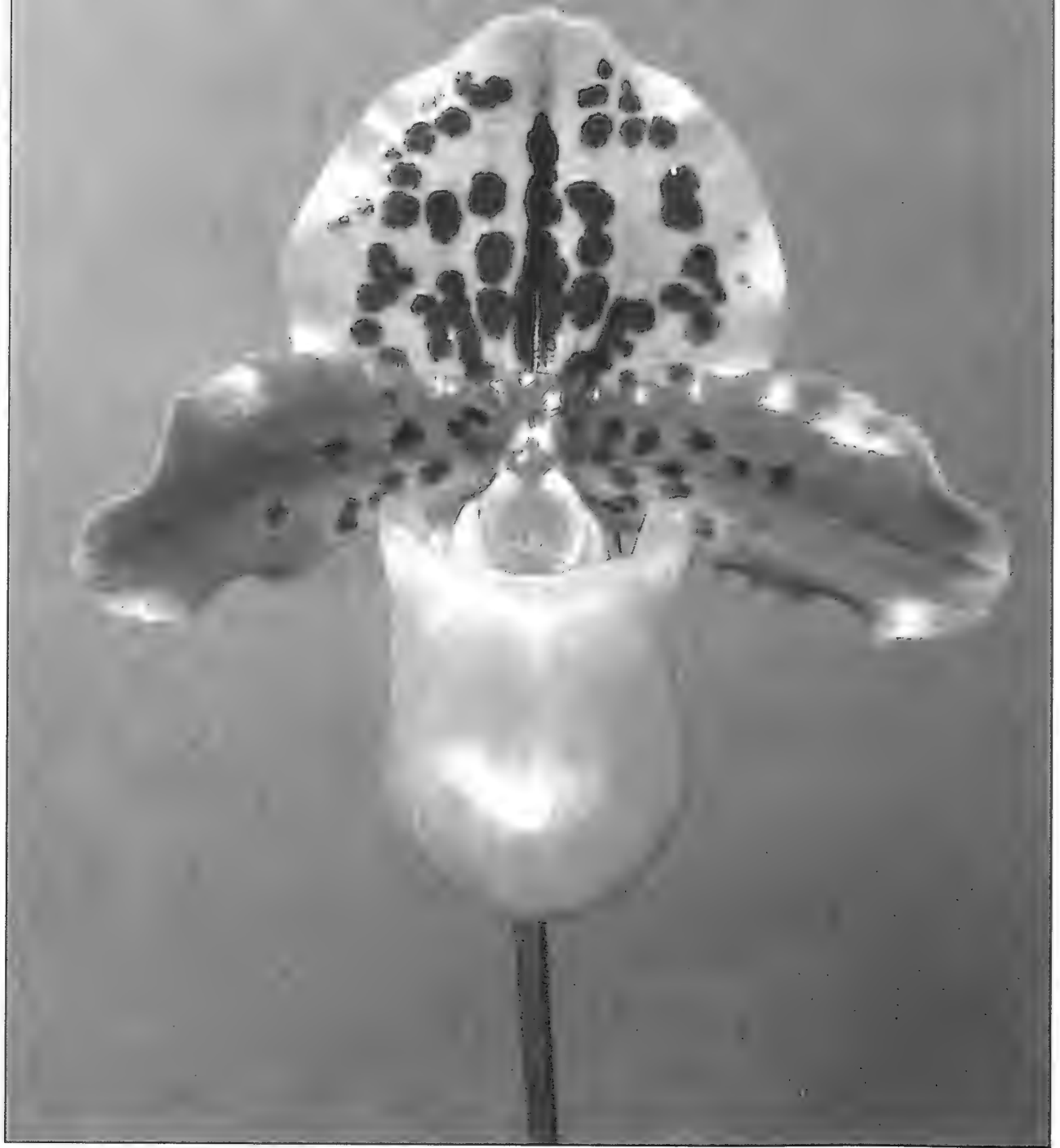
Clive and Agi Halls of Mt Beenak Orchids won the **Victorian Oncidiinae Hybrid of the Year** category

(sponsored by the Bendigo Orchid Club), this time with *Odontioda* National Mint 'Ivy' HCC/OSCOV. They also won **Victorian Award of Distinction of the Year** (sponsored by the Werribee Orchid Club) with *Masdevallia* Chilli Falcon 'Beenak' AD/OSCOV.

Although professional growers won only five awards in 2011, namely, Victorian Paphiopedilum of the Year and Victorian Seedling of the Year (Castle Creek Orchids), the Victorian Australian Native Species of the Year (The Hanging Garden), and Victorian Oncidiinae of the Year and the Award of Distinction of the Year (Mt Beenak Orchids).



 The **Victorian Laeliinea of the Year** was *Soprocattleya* Royal Beau 'Stanley' HCC/OSCOV shown by Michael Coker of Heidelberg. Photo: Michael Coker



Michael Coker also grew the **Victorian Paphiopedilum Species of the Year**, namely, *Paphiopedilum henryanum* 'Arbor' AM/OSCOV. Photo: Michael Coker


Country growers won the categories for Victorian Masdevallia of the Year, Victorian Best Cultured Species of the Year and Victorian Best Cultured Hybrid of the Year, Victorian Australian Native Hybrid of the Year. Amateur growers from the Greater Melbourne area did a little better this year than in the past, winning the categories for the Victorian Species of the Year (also the Victorian Orchid of the Year), Victorian Laeliineae Hybrid of the Year, Victorian Paphiopedilum Species of the Year, Victorian Cymbidium of the Year and the Victorian Any Other Hybrid of the Year.

Considerably more awards were granted in 2013, but unfortunately many growers did not complete their award 'picture' requirements before the 31st January 2014 cut-off date.

I thank the OSCOV Awards Secretary (and Past President), Stephen Early, for providing the photographs used in this article. ■

Meryl Early
Carrum Downs, Victoria
Email: swearly@bigpond.net.au



 *Phragmipedium* Inca Rose 'Alexandra' HCC/OSCOV, grown by Michael Coker of Heidelberg was **Victorian Any Other Hybrid of the Year**. Photo: Michael Coker



△ The **Victorian Oncidiinae Hybrid of the Year** was won by Clive and Agi Halls of Mt Beenak Orchids with *Odontioda* **National Mint 'Ivy'** HCC/OSCOV. *Photo: Clive Halls*

▷ Clive and Agi Halls also won the **Victorian Award of Distinction of the Year** with *Masdevallia* **Chilli Falcon 'Beenak'** AD/OSCOV. *Photo: Clive Halls*



Mt Beenak Orchids

No. 1 for Masdevallias

Check out our complete range
of cool growing orchids
on our website:

www.mtbeenakorchids.com.au

*Cool growing orchids and
Mail Order our speciality*

27 Hacketts Creek Rd, Three Bridges, Vic. 3797

Ph/Fax (03) 5966 7253

Email: clivehalls@bigpond.com



Rare colour form of *Maxillaria tenuifolia*

Text and photos by David Banks

The "Coconut Orchid", *Maxillaria tenuifolia* is one of about 500 species of *Maxillaria* that are native to Central and South America. It is a popular orchid in cultivation, largely due to its ease of culture, reliable flowering every year, rich blood-red coloured blooms and a most pleasant and distinctive "coconut oil" fragrance. Many grow this species for the spicy perfume alone.

Maxillaria tenuifolia is an upright growing species, with long, stiff, narrow grass-like leaves (hence the name *tenuifolia*). As the stems of linked pseudobulbs get longer they will often begin to arch, eventually becoming somewhat untidy and pendent. Such plants can be confidently cut back with the sections of rhizome replanted. The main plant will re-shoot from dormant growth eyes at the base of the specimen.

This (and related) species have a network of short dormant roots hidden behind the brown papery bracts directly below the base of the pseudobulb. These will quickly become active and start growing when potted into suitable medium.

This species is common throughout Central America and blooms throughout the summer. It has pale orange-red to blood red 40-50mm flowers, with a yellow labellum spotted in red, with a very strong and pleasant coconut fragrance.

On my visits to California, USA, I have been fortunate to visit some amazing private collections and specialist orchid nurseries. On a recent visit to the "Pandora's Box" which is Andy's Orchids in Encinitas (north of San Diego), I was treated to seeing an unusual colour form of this epiphytic species.

This plant had yellow to light gold blooms, and was labelled as *Maxillaria tenuifolia* forma *aurea*. This is a rare colour form and I doubt it is in Australian orchid collections yet. I am sure this would be a popular addition to specialist orchid collections if plants were made available. Andy's collection is amazing and inspiring....there are choice orchids everywhere! I seem to spend most of my time at Andy's Orchids taking photographs of things I have never seen before. Incidentally, this rare colour form was growing next to one of the darkest and best-shaped examples I have seen, as you can see from the images with this note.

Maxillaria tenuifolia
forma *aurea*

Cultivation

This species withstands a wide temperature range and can be cultivated in a range of climates, from cool to sub-tropical. In the tropics, it grows well but can be a bit shy blooming, as it appears to require a significant drop in night-time temperature to initiate flowering.

Maxillaria tenuifolia is well suited to pot culture, in a bark-based medium that retains moisture that is also free draining. Specimens may also be grown on hardwood, cork or treefern. I find the plants prefer treefern as it holds more moisture and the fibres are easily penetrated by the orchids moisture seeking roots. Acclimatised plants will take quite bright light, and this species is readily grown with other orchid genera such as Cymbidiums, Cattleyas and softcane Dendrobiums.

Thanks again to Andy Phillips for showing me through his vast collection... again!

David Banks
Hills District Orchids
Seven Hills, NSW

Email: david@hillsdistrictorchids.com



THE
Orchid
pot
co.

SQUARE VANDA POTS
165mm x 165mm x 80mm
100mm x 100mm x 60mm

ORCHID POTS
300mm x 120mm
250mm x 150mm
200mm x 200mm

200mm x 100mm
175mm x 120mm
150mm x 100mm
125mm x 75mm

120mm x 120mm
100mm x 120mm
100mm x 75mm
80mm x 100mm

80mm x 65mm
70mm x 50mm
60mm x 70mm
50mm x 65mm

BASKET POTS
200mm x 130mm
140mm x 100mm
80mm x 75mm

21 Jambali Road, Port Macquarie, NSW 2444 Australia

Phone: (02) 6581 1735
Website: www.orchidpotco.com

Fax: (02) 6581 1736
Email: orchidpotco@bigpond.com

AOR 001

RED DIAMOND
design
ABN. 13 741 588 428

- Signs • Flyers • Advertisements
- Brochures • Catalogues • Magazines
- Business Stationery, etc.

0424 141 637
e rdd@netspace.net.au

Growing Orchids in the Garden

Text and photos by David Banks

Not all gardeners have greenhouses to grow their orchids in. Orchids certainly can make an impact in an established garden. To start with, only hardy and durable orchids should be selected for incorporation into the garden. There are few orchids that can be grown in the garden in cool climates (mostly limited to select terrestrial genera), but the number of species certainly increases as you move into warmer climates.

Orchids on Trees

There are many orchids that will grow well on trees in the garden. It is important to select the right type of tree, which has a rough texture to the bark, that doesn't flake or exude gum. The obvious choice is to select trees that are fine orchid hosts in the wild, but this isn't always possible or practical. If you are not sure, try it! The orchid will soon let you know if it's not happy.

Some of the best garden trees for "orchidscaping" include Coral Trees (*Erythrina* sp.), Frangipani (*Plumeria* sp.), Jacaranda, Liquidambar, English Oak (*Quercus robur*), Camellia, Magnolia, Banksia, Melaleuca, Callistemon, Grevillea robusta, and citrus fruit trees (*Citrus* sp.). The main trunk and branches may be used. Larger plants may also be attached to the trunks of mature palm trees that have a fibrous texture. This is only a truncated list as there are hundreds of other suitable hosts.

Select a site for the orchid; remembering that most types like to be kept out of direct summer sunlight. Deciduous trees are ideal, as they let in plenty of quality light in winter and provide shade during the heat of summer. Tie the orchids on firmly, old pantyhose are ideal for this, avoid plastic-coated wire, as this will cut into live trees. The plant may be given a pad of *Sphagnum* moss at the roots to provide a bit of extra moisture whilst the plant is establishing. The orchid appreciates regular watering, at least for the first six months. After that you will be surprised how hardy they are just relying on rainwater. However the odd splash after a hot summer's day would be appreciated!

Ironically, you can have orchids that struggle in the general collection, yet thrive when divisions are transferred to suitable hosts in the garden. A couple of examples, from experience, include *Dendrobium monophyllum* on a major frangipani branch and *Dockrillia cucumerina* on the trunk of a *Hakea*. Not only do they grow vigorously, but they also bloom heavily throughout the year. You will find that the blooms (particularly the pinks, reds and purples), on orchids grown out of doors, will have a greater intensity of colour, than those grown in the shadehouse.

There are many native twig epiphytes that thrive on the outer stems of shrubs. Many epiphytic *Sarcochilus* species (and their relatives), that are often difficult to maintain in the shadehouse, will surprisingly bolt away on a live host, with their roots travelling quite a distance away from the plant.

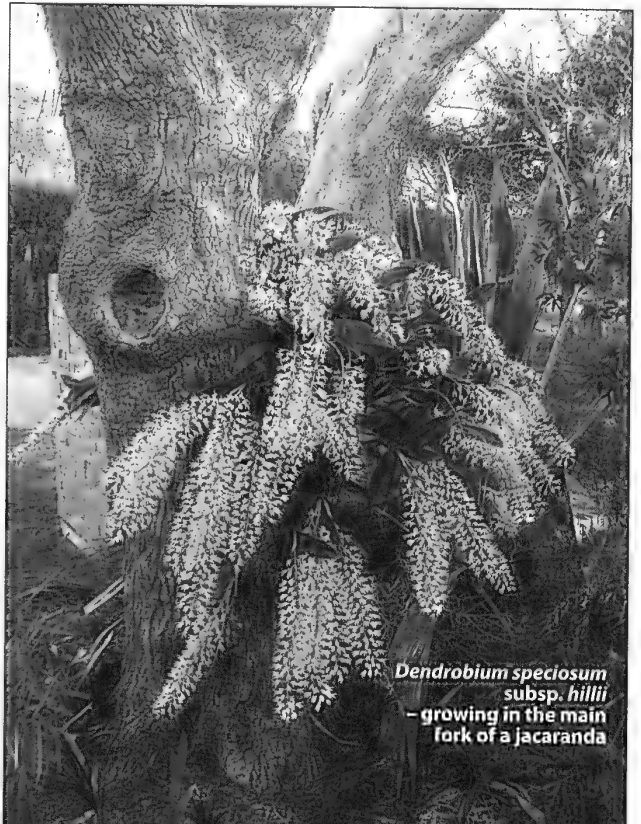
Examples of this include *Sarcochilus dilatatus*, *S. hillii*, *S. spathulatus* and the related *Plectorrhiza tridentata* and *Papillilabium beckleri*.

Orchids on Rocks

Sedimentary rocks such as sandstone and conglomerate, and rocks of volcanic origin (basalts and granites) are the best hosts for orchids in a rockery situation. Large boulders are preferable to a grouping of small rocks. Limestone may also be used. I have yet to see an orchid truly thrive when grown on concrete. The lime content is just too strong for the orchid's roots. Some will try to justify this by pointing out that many orchids are found in the wild growing on limestone. That is certainly true, but limestone decays very slowly and any lime released would hardly be detected. Select sites that provide some shading during the heat of the day.

Terrestrial Orchids

A limited number of orchids are suited to growing in the ground. Slugs and snails are the biggest enemy to terrestrial orchids in the garden. They can literally destroy a season's growth overnight, and for the deciduous types this could prove fatal. Hybrid cymbidiums may also be grown on elevated beds of bark and compost with a ring of larger rocks around them, to keep the mixture in.



Dendrobium speciosum
subsp. *hillii*
— growing in the main
fork of a jacaranda

Suitable Orchids for the Garden

Obviously there are hundreds of potential candidates for garden culture. However the following selection identifies plants that I have seen thrive in what are not always ideal conditions.

= tree orchid (epiphyte)
 + = rock orchid (lithophyte)
 * = ground orchid (terrestrial)

Cool (temperate) climate			
<i>Bifrenaria harrisoniae</i>	# +	<i>Dockrillia pugioniformis</i>	#
<i>Bletilla striata</i>	*	<i>Dockrillia striolata</i>	# +
<i>Calanthe triplicata</i>	*	<i>Laelia anceps</i>	#
<i>Coelogyne cristata</i>	#	<i>Pleione formosana</i>	*
<i>Dendrobium falcorostrum</i>	#	<i>Sarcochilus fitzgeraldii</i>	+
<i>Dendrobium kingianum</i>	+	<i>Sarcochilus hartmannii</i>	+
<i>Dendrobium speciosum</i>	# +	<i>Stenoglottis longifolia</i>	*
Intermediate (sub-tropical) climate			
<i>Aerides odoratum</i>	#	<i>Dockrillia linguiformis</i>	# +
<i>Brassia verrucosa</i>	# +	<i>Dockrillia teretifolia</i>	#
<i>Bulbophyllum rothschildianum</i>	#	<i>Epidendrum radicans</i>	*
<i>Cattleya bowringiana</i>	# +	<i>Laelia anceps</i>	# +
<i>Cattleya loddigesii</i>	#	<i>Laelia tenebrosa</i>	#
<i>Coelogyne fimbriata</i>	#	<i>Maxillaria porphyrostele</i>	# +
<i>Coelogyne ovalis</i>	# +	<i>Maxillaria tenuifolia</i>	#
<i>Dendrobium chrysotoxum</i>	# +	<i>Oncidium flexuosum</i>	# +
<i>Dendrobium kingianum</i>	+	<i>Rhyncholaelia glauca</i>	#
<i>Dendrobium nobile</i>	#	<i>Stanhopea nigroviolacea</i>	#
<i>Dendrobium speciosum</i>	# +	<i>Vanda coerulea</i>	#
Warm (tropical) climate			
<i>Aerides lawrenciae</i>	#	<i>Dendrobium discolor</i>	# +
<i>Ansellia africana</i>	# +	<i>Doritis pulcherrima</i>	# +
<i>Brassavola nodosa</i>	#	<i>Laelia purpurata</i>	# +
<i>Broughtonia sanguinea</i>	#	<i>Neobenthamia gracilis</i>	*
<i>Bulbophyllum longiflorum</i>	# +	<i>Oncidium sphacelatum</i>	# +
<i>Cattleya amethystoglossa</i>	# +	<i>Phaius tankervilleae</i>	*
<i>Cattleya intermedia</i>	#	<i>Rhyncholaelia digbyana</i>	#
<i>Cattleya skinneri</i>	#	<i>Rhynchostylis gigantea</i>	#
<i>Coelogyne pandurata</i>	# +	<i>Rhynchostylis retusa</i>	#
<i>Dendrobium anosmum</i>	#	<i>Sobralia macrantha</i>	*
<i>Dendrobium crumenatum</i>	#	<i>Vanda tricolor</i>	# +

David Banks
 Hills District Orchids
 Seven Hills, NSW
 Email: david@hillsdistrictorchids.com



A range of orchid genera and epiphytic ferns at RF Orchids Florida, USA

Growing Orchids in Cool Climate Australia

(Second Edition) 2013

Fraser, M.J., Wright, J., & Ferris, W.

Written by members of the Orchid Society of Canberra this practical guide to the cultivation of orchids also offers somewhat more than the title suggests. Topics include; what are orchids, structures for growing orchids, potting media, mounting orchids, propagation, pests and diseases and showing your orchids. The main section covers individual cultivation of the most popular types of orchids that we all fall in love with at the beginning... *Cymbidium*, *Cattleya*, *Oncidium*, *Paphiopedilum*, *Masdevallia*, *Stanhopea*... and much more. Paperback. 128 pages.

\$25.00 plus postage

Visa/MasterCard accepted

Australian Orchid Foundation

P.O. Box 322,
 Essendon North, Vic. 3041
 Phone/Fax (03) 5627 6303

www.australianorchidfoundation.org.au



Brassavola nodosa in the tropical gardens of RF Orchids in Florida, USA



Cymbidium Magic Devon 'Maisie' was one of the more unusual and distinctive newer *Cymbidium* hybrids benched at the 2013 Orchid Expo in New Zealand. Owned and exhibited by Joe & Betty Vance of Villa Orchids, this 2005 hybrid between *Devon Caress* and *Tethys* was hybridised by Andy Easton.
Photo: D.P. Banks

New Species in the *Pterostylis nana* R.Br. complex (Orchidaceae) from Western Australia - 1

by David L. Jones and Christopher J. French

Abstract

Pterostylis brunneola, *Pterostylis jacksonii* and *Pterostylis lortensis* are described here as new.

Key Words

Orchidaceae, *Pterostylis nana*, *Pterostylis brunneola*, *Pterostylis dilatata*, *Pterostylis jacksonii*, *Pterostylis lortensis*, *Pterostylis pyramidalis*, *Pterostylis timothyi*, new species, Western Australia, Australian flora.

Introduction

In the strict sense, *Pterostylis nana* R.Br. has been shown to be confined to Tasmania, some Bass Strait islands and southern Victoria (Jones 1998, Jones *et al.* 1999), although there is still uncertainty as to the identification of populations in northern Victoria and New South Wales. It is apparent that considerable radiation and habitat adaptation has occurred in Western Australia resulting in a complex of taxa which can be recognised as distinct from *Pterostylis nana sensu stricto*.

Three species in the *P. nana* R. Br. group from Western Australia have been described; *P. pyramidalis* Lindl. described in 1839, the enigmatic *P. dilatata* A.S. George named in 1984, which is the only member of the group which lacks a basal rosette of leaves and *P. timothyi* (D.L.Jones) Jones & Duretto, named in 2006.

Ongoing studies by us over more than 20 years have identified numerous undescribed species ranging from 35mm tall with very small tight rosettes and one to two stem leaves to in excess of 450mm tall with a loose rosette and multiple stem leaves. Some of these taxa appear to form related groups while others seemingly stand alone.

Some of the undescribed taxa are common, widespread and well conserved while others are known from only one or two locations, are possibly quite rare and may be under threat. It is extremely important that these taxa are formally recognised to allow appropriate conservation measures to be enacted.

Three species are described as new in this paper.

Materials and Methods

Descriptions of the new taxa were made from fresh specimens. Unless otherwise indicated, all types of *Pterostylis* relevant to this study (or photographs thereof), and collections cited, have been seen by us.

Characterisation of *Pterostylis nana* R.Br.

Pterostylis nana R.Br. *sensu stricto* is characterised as follows:- Rosette basal with 4-8 neat, stem-encircling leaves; lamina ovate, 4-15mm long, 3.5-8mm wide, dull green, entire or with wavy margins; petioles 3-7mm long. Scape 5-15cm tall, thin, smooth or slightly scabrous. Stem leaf solitary, ensheathing. Ovary glabrous. Flower solitary, stiffly erect, 10-15mm long, 4-5mm across, bright green and translucent white, somewhat shiny. Galea apex horizontal or shallowly curved; dorsal sepal and petals of similar length. Dorsal sepal blunt. Lateral sepals tightly embracing the galea; conjoined part shallowly curved when viewed from the side; internal upper margin of synsepalum with a small dark green central ligule-like growth; free points of synsepalum erect, filiform, 10-15mm long, smooth. Labellum not visible through the sinus in any position. Labellum lamina ovate-oblong, 4-5.5mm long, 1.5-1.8mm wide, margins with short cilia. Column 7-8mm long.

Illustrations: A detailed line drawing of *Pterostylis nana sens. strict.* is included in Jones & Clements 2002, and a photograph in Jones *et al.* 1999.

Taxonomy

1. *Pterostylis brunneola* D.L.Jones & C.J.French, *sp. nov.* With affinity to *Pterostylis nana* R.Br. but differing by its loosely sheathing, ovate-cordate stem leaves, larger brown and white flowers, sharply pointed dorsal sepal, and narrowly oblong labellum.

Type: Western Australia. Avon District; About 30 km south-east of Narrogin; Wickepin-Harrismith Road, 6 September 1997, D.L.Jones 15379 (holo CANB 647909).

Illustration: Page 347, Hoffman & Brown (1998), as *Pterostylis* aff. *nana*. Page 359, Brown *et al.* (2013), as *Pterostylis* sp. "giant"

Description: Rosette basal, with 4-6 leaves; lamina elliptic to ovate, 12-25 mm long, 7-11 mm wide, mid-green, paler beneath, obtuse to acute, entire; petioles 2-5 mm long. Scape 8-15 cm tall, strongly scabrous. Stem leaves loosely sheathing, 2-3, ovate-cordate, 8-15 mm long, 5-8 mm wide. Ovary 4-6 mm long, brownish to greenish, strongly scabrous. Flower solitary, 17-20 mm long, 5-5.5 mm across, translucent white with light brown stripes, ageing darker brown. Galea apex horizontal to shallowly decurved; dorsal sepal about as long as the petals. Dorsal sepal 19-23 mm long, 8-10 mm wide, inflated at the base then tapered, striped in the proximal half, coalescent in the distal half; apex acuminate. Lateral sepals tightly embracing the galea; sinus protruding slightly when viewed from the side; conjoined part 9-10 mm long, 4-4.5 mm wide; central notch shallow, dark green to dark brown, with a

reddish-brown lobe c. 1.5 mm long, folded internally; free points erect, filiform to narrowly clubbed, 12-16 mm long, verrucose. *Petals* 17-20 mm long, 4-5 mm wide, falcate, brownish with a narrow white central stripe; distal margins flared, undulate to crisped; flange ciliate. *Labellum* erect, curved forwards suddenly near the apex, white with sparse brown stripes in the proximal half, red-brown to brown in the distal half. *Labellum lamina* oblong, c. 5 mm long, 2 mm wide; margins ciliate; apex obtuse. *Callus* c. 0.5 mm across, ridged, expanding to c. 0.7 mm across near the apex; basal appendage deflexed, linear-tapered, c. 2.2 mm long, curved up at the apex, with 3 sparse lobes. *Column* 8-9 mm long, angled away from the ovary at about 45° at the base then obliquely erect, light green. *Column wings* c. 2.2 mm long; basal lobe c. 1 mm long, c. 0.5 mm wide, at an angle of c.70°; anterior margin curved, obtuse; inner margin and apex adorned with short white cilia; mid-section c. 1mm long, brown; apical lobe linear, c. 0.4 mm long. *Anther* c. 1 mm long, obtuse. *Pollinia* linear, c. 1 mm long, slightly falcate, mealy, yellow. *Stigma* central, elliptical, c. 3 mm long, c. 1 mm wide. *Capsule* not seen.

Distribution and ecology: Endemic in south-western WA where restricted to a small area near Lake Toolibin. The new species grows in woodland dominated by banksias and groves of tall sheoaks in deep grey to white sand. The soil among the sheoaks is covered with a thick layer of sheoak needles.

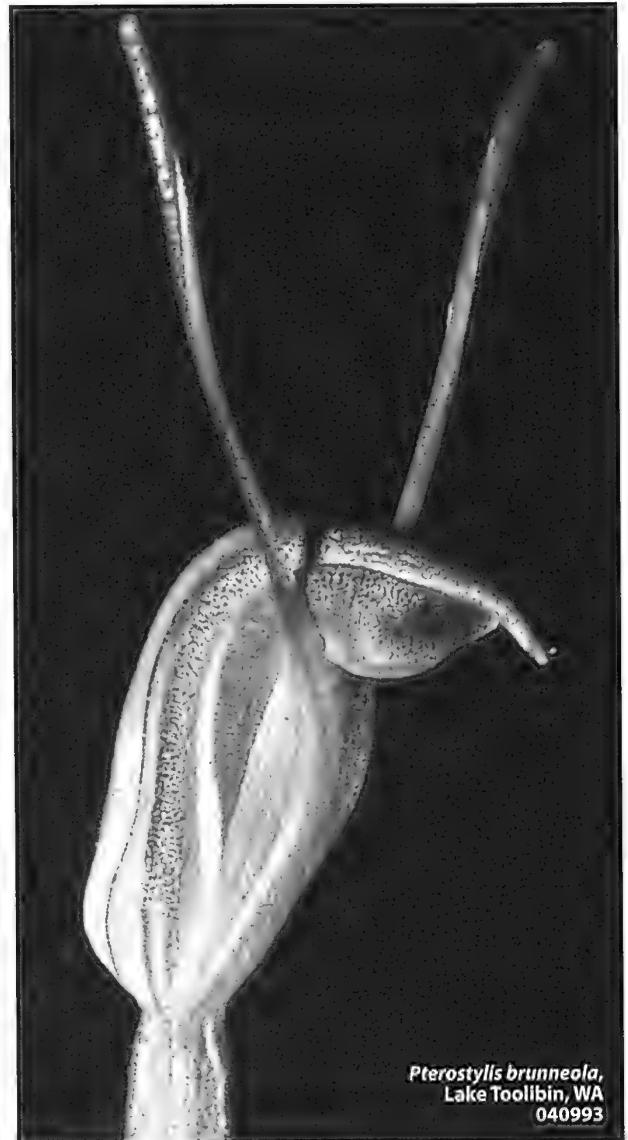
Flowering Period: July-September.

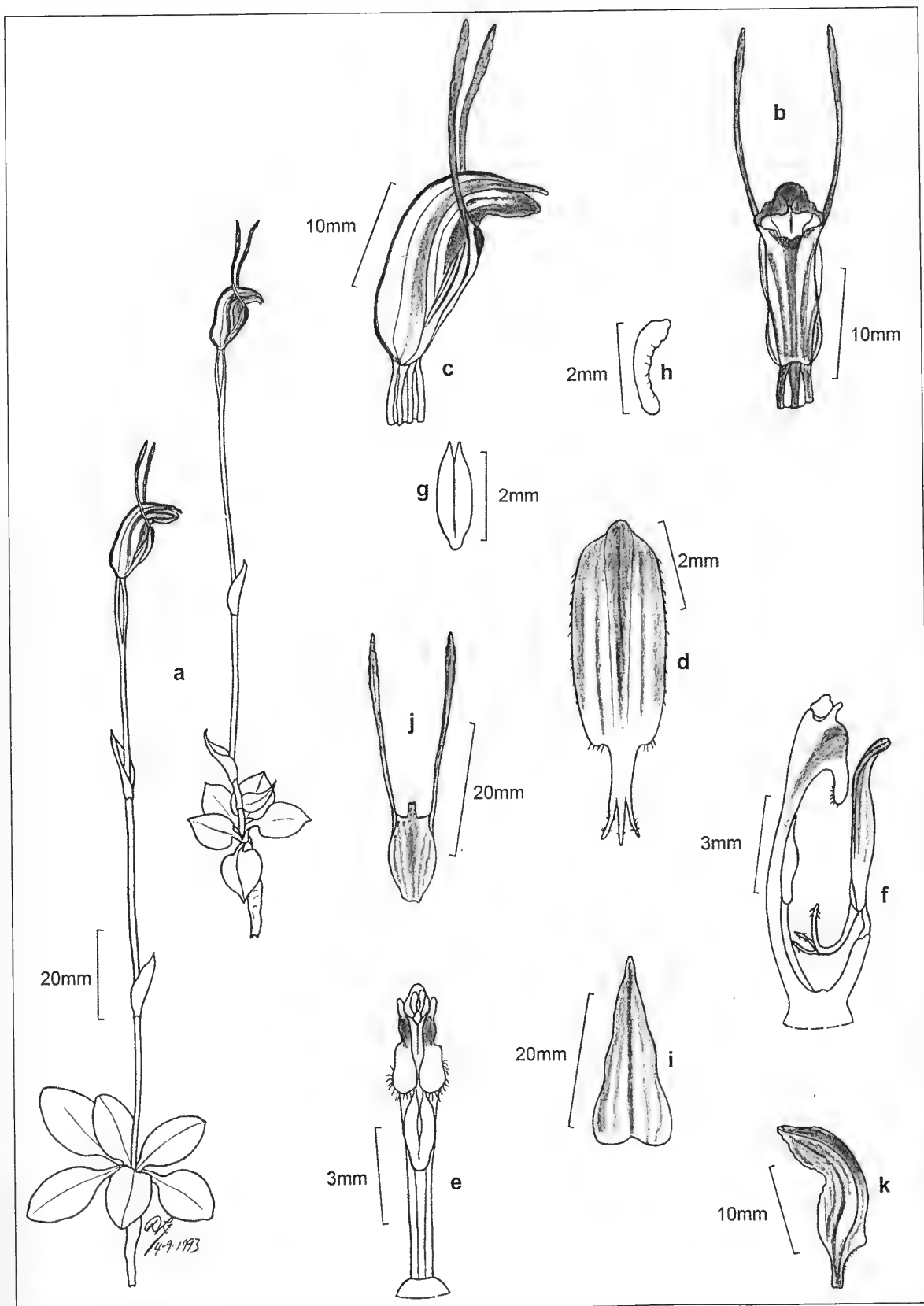
Recognition: Characterised by broadly ovate-cordate stem bracts that spread widely from the stem, scabrous scape, narrowly clubbed sepals and relatively large (13-14mm long) brown and white flowers with a linear-oblong labellum. By contrast *Pterostylis nana* has a thinner, mostly smooth scape and ovary, much narrower stem bract(s) appressed to the stem, smaller, narrower green and white flower and a smaller ovate-oblong labellum with shortly ciliate margins.

Notes: This species is rarely found growing with other members of the *Pterostylis nana* R. Br. complex. Some clones with less brown colouration in the flowers and smaller flowers have been found over a wider area between Corrigin, Wagin and Lake Grace.

Conservation status: Of restricted distribution and apparently becoming less common; suggest 3RC according to the criteria of Briggs & Leigh (1996).

Etymology: The Latin *brunneolus*, brownish, in reference to the flower colour.





Pterostylis brunneola, Lake Toolibin, WA

a. flowering plants; b. flower from front; c. flower from side; d. labellum; e. column from front; f. column and labellum from side; g. stigma; h. pollinium; i. dorsal sepal; j. lateral sepals; k. petal; l. stem bract; m. rosette leaf. © D.L.Jones 23 August 1989

2. *Pterostylis jacksonii* D.L.Jones & C.J.French, *sp. nov.*
With affinity to *Pterostylis nana* R.Br. but differing by its larger, thicker, fleshy leaves scattered up the scape, larger flowers, lateral sepals with strongly clavate free points and, a larger ovate-oblong labellum with scabrid to hairy margins.

Type: Western Australia. Darling District. Base of the summit rock, north of Mt Frankland, 20 km north of Walpole, Bill Jackson (D.L.Jones 10214), 1 October 1992 (holo CBG 9610254).

Illustration: Page 360, Brown *et al* (2013), as *Pterostylis* sp. "granite"

Description: Rosette basal, leaves 5-8, mid green, dull; lamina ovate to sagittate, 4-12 mm long, 3-8 mm wide, margins entire to slightly crispate, apex acuminate; petioles 3-9 mm long, slender, narrowly winged. Scape 3.5-10 cm tall, c. 1 mm wide, tuberculate. Stem leaves 3 or 4, narrowly ovate-lanceolate, 7-12 mm long, 3-5 mm wide, acuminate, spreading, sheathing at the base. Ovary 3-7 mm long, green to light brown, tuberculate. Flower solitary, 14-18 mm long, 4-5 mm wide, stiffly erect, white with green markings, the colours coalescent towards the apex of galea where usually dark green, sometimes light brown towards the galea apex. Galea shallowly gibbous at base then erect, bending forwards suddenly in the distal quarter, apex nearly horizontal or shallowly decurved; dorsal sepal longer than the petals. Dorsal sepal ovate-lanceolate, 20-23 mm long, 8-10 mm wide, inflated at the base then sharply tapered to long acuminate apex, boldly striped, apex darker.

Lateral sepals erect, tightly embracing the galea; conjoined part 8-11 mm long, 4.5-5.5 mm wide, narrowed to c. 2.5 mm wide at the base, protruding in a shallow bulge when viewed from the side, the upper margins sloping gently to a dark green central notch, tapered suddenly into the free points; central lobe c. 1 mm long, obtuse, dark green, folded internally; free points held high above the galea 13-19 mm long, filiform, erect or slightly reflexed. Petals obliquely oblong, 13-16 mm long, 3.5-4 mm wide, strongly falcate, distally dilated, anterior margins slightly irregular, subacute to obtuse, green with a narrow white central patch; flange broadly obtuse, c. 3 mm wide, the proximal curved margin glabrous. Labellum erect, curved forwards suddenly near the apex, not visible through the sinus in any position; basal claw ligulate, c. 2 mm long, c. 0.8 mm wide. Labellum lamina oblong-elliptic, 4-4.5 mm long, c. 1.4-2 mm wide, white with green to brown markings, margins glabrous, some crowded short white trichomes flanking the stalk of the basal appendage, apex obtuse. Callus 0.2-0.3 mm wide at the base, expanding to c. 0.6 mm at the apex, raised in a rounded central ridge; basal appendage c. 1.6 mm long, c. 0.8 mm wide at the base, linear, deflexed, incurved near the apex, the margins with short white antrorse trichomes, apex trifid, hairy. Column 6.5-7.5 mm long, angled away from the ovary at about 45° at the base, then obliquely erect, white and greenish-brown. Column wings 2.7-3 mm long; basal lobe c. 1 mm long, c. 0.6 mm wide, white, at an angle of about 60°, anterior margin curved, apex obtuse, with short white cilia; mid section c. 1.2 mm long, brownish; apical lobe 0.4-0.6 mm long, linear, obtuse. Anther c. 0.8 mm long, obtuse. Pollinia linear, c. 1 mm long, falcate, yellow, mealy. Stigma elliptic, 2.4-2.7 mm long, 0.8-1 mm wide, raised, fleshy. Capsule not seen.



Distribution and ecology: Endemic in south-western Western Australia ranging from north of Walpole to the Porongorups. It grows on ledges and in crevices on granite outcrops.

Flowering Period: July to end of September.

Recognition: Characterised by broad thick leaves either in a basal rosette or scattered up the scape, relatively large flower, thick free points on the lateral sepals, dilated petals and an oblong-elliptic labellum with minutely hirsute margins. By contrast *Pterostylis nana* has smaller, thinner leaves in a distinct rosette, smaller flower with filiform free points, narrow petals and an oblong labellum with entire margins.

Conservation status: Relatively widespread but not common. Conserved in two National Parks.

Etymology: Named after William (Bill) Pownall Jackson (1929-2002), dedicated orchidologist from Walpole in south-western Western Australia. Bill discovered this species and several other new species of orchids from near Walpole.

Pterostylis jacksonii,
Porongorups, WA
051099



ORCHIDS NORTH

Gordonvale 20km South of Cairns
On The Bruce Highway



Vandas,
Dens,
Cats,
Phallies,
& more.

No Catalogue Available

email: orchidsnth@bigpond.com

Phone (07) 4056 2357 Mob 0405 453 171

RETINA AUSTRALIA

Retinitis pigmentosa (RP)

is the major cause of youth blindness!
If you have RP, or know someone who has,
please contact the charity/support group

RETINA AUSTRALIA



FIGHTING BLINDNESS

For information and assistance phone

1800 999 870

www.retinaAustralia.com.au

Mallee Phallies

Importing plants from leading Asian nurseries on a regular basis

Phals, paphs, cattis, oncidis, dends and others

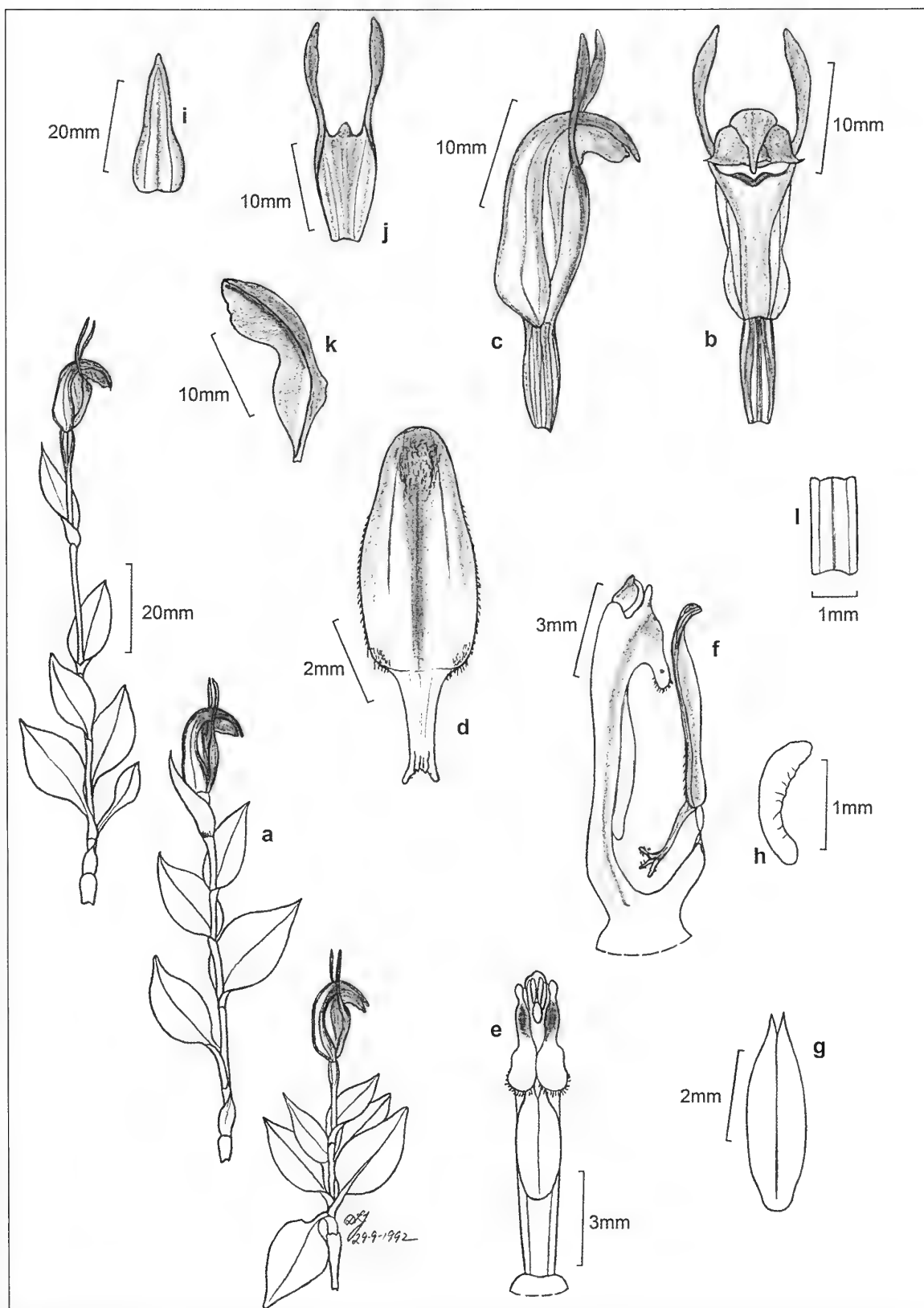
See our ranges at ...

<http://www.kevalloyd.com.au/malleephallies.html>

Keva Lloyd, 8-12 Gallagher St., Sea Lake. Vic. 3533

Ph. 03 5070 1404 BH, 03 5070 2072 AH

Email: malleephallies@gmx.com



Pterostylis jacksonii, Mt Frankland, WA

a. flowering plants; b. flower from front; c. flower from side; d. labellum; e. column from front; f. column and labellum from side; g. stigma; h. pollinium; i. dorsal sepal; j. lateral sepal; k. petal; l. labellum hinge. © D.L.Jones 29 September 1992

3. *Pterostylis lortensis* D.L.Jones & C.J.French, *sp. nov.*
With affinity to *Pterostylis nana* R.Br. but differing by its larger, fleshy rosette leaves, scattered stem leaves, lateral sepals with clavate free points, and an oblong labellum with scabrid/hairy margins.

Type: Western Australia. Eyre District; Lort River, west of Esperance, 24 September 1992, C. & M. French (D.L.Jones 10166) (holo CBG 663584).

Illustration: Page 368, Brown *et al* (2013), as *Pterostylis* sp. "south coast clubbed sepals"

Description: *Rosette* basal, with 3-5 leaves; lamina ovate, elliptic or sagittate, 6-18 mm long, 3-12 mm wide, fleshy, bright green, dull to shiny, acute to obtuse; petioles 0-7 mm long, slender, narrowly winged. *Scape* 3-14 cm tall, glabrous to sparsely scabrous. *Stem leaves* erect to spreading, 2-5, elliptic to ovate, 7-15 mm long, 3-7 mm wide. *Ovary* 3-6 mm long, light green, glabrous. *Flower* solitary, 11-13 mm long, c. 4 mm across, stiffly erect, white with green markings, sometimes light brown towards the apex. *Galea* apex nearly horizontal to shallowly decurved, the dorsal sepal as long as the petals. *Dorsal sepal* ovate-lanceolate, 15-17 mm long, 7-9 mm wide, boldly striped, apex subacute, darker. *Lateral sepals* erect, tightly embracing the galea, forming a shallow curve when viewed from the side; conjoined part 6-7 mm long, 4.5-5 mm wide narrowed to c. 2.5 mm wide at the base; central notch dark green, with a blunt dark green central lobe c. 1 mm long; free points held high above the galea or recurved, 7-9 mm long, thick, clubbed, often yellowish or brownish. *Petals* 13-15 mm long, 3.5-4 mm wide, falcate, pale green to brownish with a narrow white central patch; distal margins flared, entire; flange glabrous. *Labellum* erect, curved forwards slightly near the apex, not visible through the sinus in any position, white with green to brown markings. *Labellum lamina* oblong, 4-4.5 mm long, c. 1.5 mm wide, margins scabrous,

with numerous short retrorse hairs, these dense on the proximal margins; apex obtuse. *Callus* 0.2-0.25 mm across, wider at the apex; basal appendage c. 1.6 mm long, margins ciliate; apex irregularly trilobed, hairy. *Column* 6.5-7.5 mm long, angled away from the ovary at about 45° at the base, then obliquely erect, white and greenish-brown. *Column wings* 2.7-3 mm long; basal lobe c. 1 mm long, c. 0.6 mm wide, white, at an angle of about 70°, anterior margin curved, apex obtuse, with short white cilia; mid section c. 1 mm long, brownish; apical lobe 0.4-0.6 mm long, linear, obtuse. *Anther* c. 0.8 mm long, obtuse. *Pollinia* linear, c. 1 mm long, falcate, yellow, mealy. *Stigma* elliptic, 2.4-2.7 mm long, 0.8-1 mm wide. *Capsule* not seen.

Distribution and ecology: Extends from Boxwood Hill to east of Condingup in a band about 25 km from the coast. Grows in moss pads on granite domes, under shrubs near streams and occasionally along the margins of winter-wet swamps.

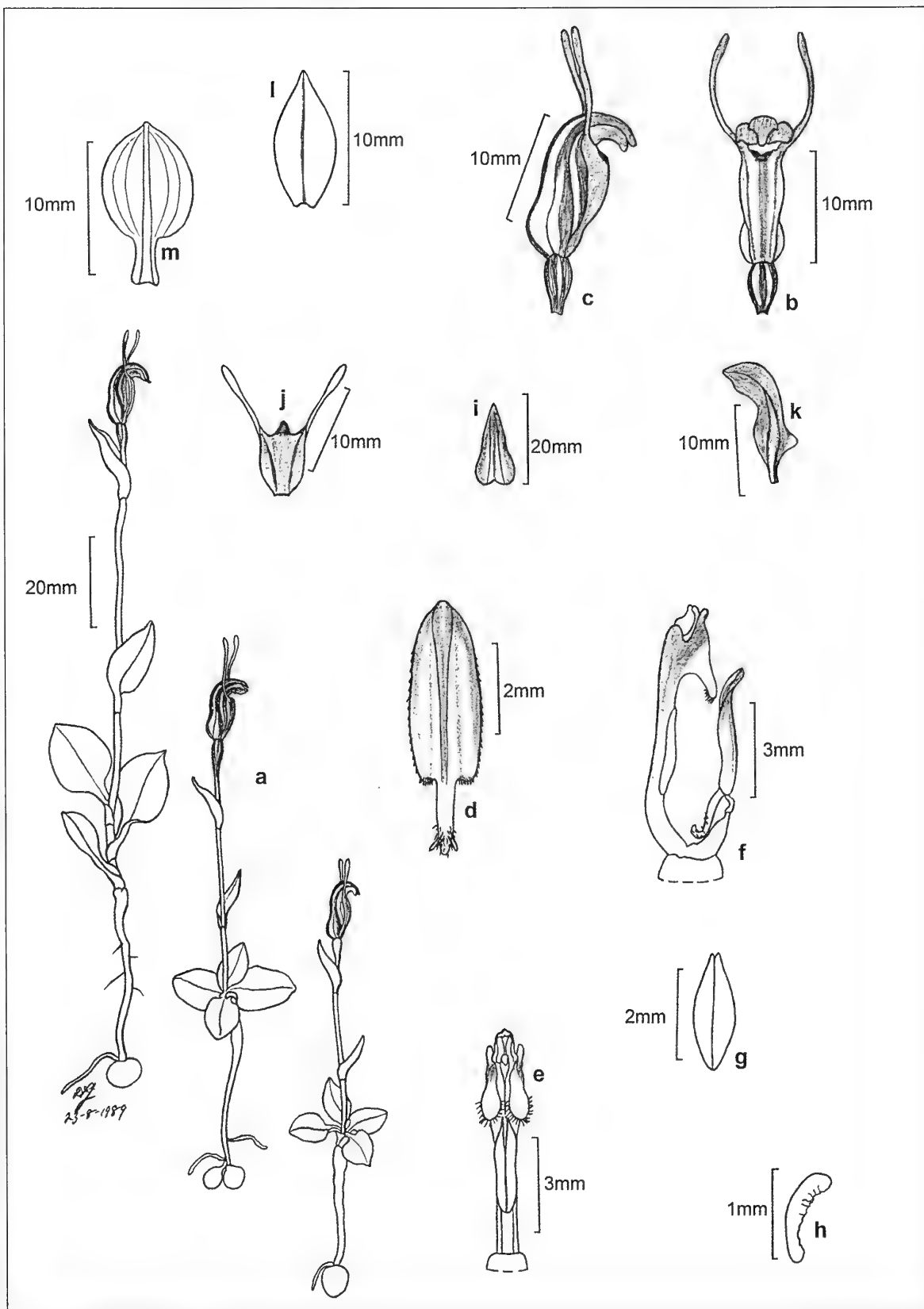
Flowering Period: August - September.

Recognition: Characterised by relatively short habit, 5-6 large fleshy leaves arranged both in a loose rosette and attached to the scape, glabrous to sparsely scabrous scape and ovary, relatively small flower, clubbed free points (often yellowish or brownish) and an oblong labellum with scabrous margins (numerous short retrorse cilia). By contrast *Pterostylis nana* has smaller, thinner leaves in a distinct rosette, smaller flower with filiform free points, narrow petals and an ovate-oblong labellum with shortly ciliate margins.

Conservation status: Widespread but not common. Conserved in one nature reserve and the Fitzgerald River National Park.

Etymology: From the type locality of Lort River.





Pterostylis lortensis, Lort River, WA

a. flowering plants; b. flower from front; c. flower from side; d. labellum; e. column from front; f. column and labellum from side; g. stigma; h. pollinium; i. dorsal sepal; j. lateral sepals; k. petal. © D.L.Jones 4 September 1993

Acknowledgements

Much appreciation to Anna Monroe for help with specimens at CANB; also the directors and curators at CANB and PERTH for giving us access to specimens. We also thank Jean Egan for preparing the drawings for publication, Mark Clements for access to photos of type specimens, Marion Garrett and Karina Richards for technical assistance. Special appreciation to Garry Brockman, Andrew Brown, Nye Evans, Barbara Jones, Marie French and the late Bill Jackson for companionship on field trips. Photographs by Chris French, drawings by David Jones.

Literature Cited

- Brown, Andrew, Dixon, Kingsley, French, Christopher & Brockman, Garry (2013) *Field Guide to the Orchids of Western Australia*, Simon-Neville Publications.
- Hoffmann, Noel & Brown, Andrew (1998) *Orchids of South-west Australia*, second edition with supplement, University of Western Australia Press.
- Jones, D.L (1998) Contributions to Tasmanian Orchidology -7: A Taxonomic Review of *Pterostylis* R.Br. in Tasmania. *Austral. Orch. Res.* 3: 135-177.
- Jones, David, Wapstra, Hans, Tonelli, Peter & Harris, Stephen (1999) *The Orchids of Tasmania*, The Miegunyah Press, Melbourne University Press, Carlton South, Australia.
- Jones, D.L & Clements, M.A. (2002) A Review of *Pterostylis* (Orchidaceae). *Austral. Orch. Res.* 4: 3-168.

David L. Jones

Kalaru, NSW, 2550

Email: dabajones@bigpond.com

Christopher J. French

Bateman, WA, 6150

Email: mail4cjfrench@gmail.com

Orchid Species

Plus

Specialising in species orchids, flasks and selected hybrids

Mail Order specialists
Open by appointment only

Props: Bill and Jan Miles

405 Main Street
Kingston, Victoria 3364

03 5345 6387

orchidspeciesplus@bigpond.com
www.orchidspeciesplus.com.au

AOR 041

ORCHIDACEOUS SUPPLIES

Suppliers of a wide range of Orchid Accessories

Whether you are a hobbyist or a professional orchid grower – we can supply your needs.

Pots – dome pots – Port Pots –
trays – stakes – plant clips – Pot Clips –
Labels – pens – fertilisers – hangers –
wide range of wire products.

Growing medias – bark, coconut husk, treefern,
perlite, peat, charcoal, sphagnum moss and more.

Agent for Eco Products

Catalogue available on request

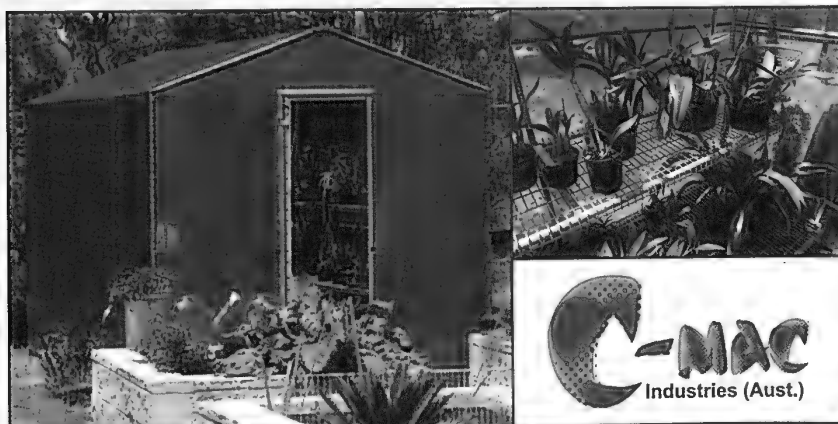
Grahame & Margaret Muller

P.O. Box 4192, Tinana, Qld. 4650

Ph: 07 4122 1251 Fax: 07 4122 4539

Email: supplies@orchidaceousbooks.com.au

AOR 111



DIY Quality Steel Shade House and Benching



- Protect orchids from extreme weather and disease
- Display your orchids to the best advantage in an ideal environment
- Considerable savings in energy, irrigation, spraying
- Kits Shipped Australia Wide - Easy to assemble and disassemble (DIY) with 3D instruction
- Custom Sizes available
- NO ADDITIONAL SETUP
OR EXTRA LABOUR COSTS



Ph: (02) 9631 6000

Web: www.nurserybenches.com.au

Miriam Ann Orchids

Alan & Miriam Merriman
89 Levy Street,
Glenbrook NSW 2773

**Sydney's only one
stop Orchid Shop**

We carry a full range of pest and
disease control chemicals suitable
for use on orchids.

The home of Merri Fert and Merri Cote.
We also carry a full range of Port Pots,
Debco Bark, Potting Media and all you
require for your orchids.

**WE ARE PLEASED TO ANNOUNCE THE
RELEASE OF**

Alan's Fertiliser Handbook

2nd edition now available \$22 + p&p
Alan's Pest & Disease Handbook still available
for \$16.50 +p&p.

- Plants, seedlings of most genera in stock.
- Nursery open most weekends or by appointment.
- Closed last weekend of the month.
Please ring before coming

Ph: 02 4739 5141

Fax: 02 4749 8090 Mobile: 0439 514141

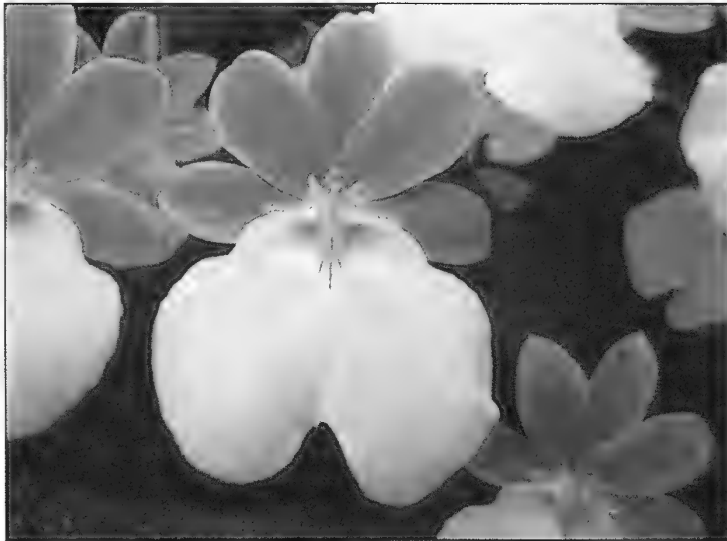
Email: mirannorchids@pnc.com.au

MASTERCARD AND VISA WELCOME

AOR 052

Unusual colour form of *Miltoniopsis vexillaria*

by Andy Easton



This wonderful cloud forest epiphytic species is found in Colombia and northern Ecuador at altitudes of between 1000 and 2200 metres.

In 2013 when visiting Colombia, I saw the most sensational colour form of *Miltoniopsis vexillaria* in the collection of Juan Felipe Posada. We did try to self-pollinate it to see if we can replicate this unique colour form.

This bloomed amongst a group of plants collected out of recently cleared forest less than a year ago. The whole population that was flowering was superior in my opinion but typically coloured. One of the best plants had a bloom which measured 101mm across the lip! These plants appeared to be diploid.

Juan Felipe was using the name "*Miltoniopsis vexillaria* var. *leucoglossa*" for this bicoloured example.

However the name *Miltonia* X *leucoglossa* is already used for the natural hybrid between *Miltonia candida* and *Miltonia spectabilis*. As we know, *Miltoniopsis* is a splinter genus derived from true *Miltonia*.

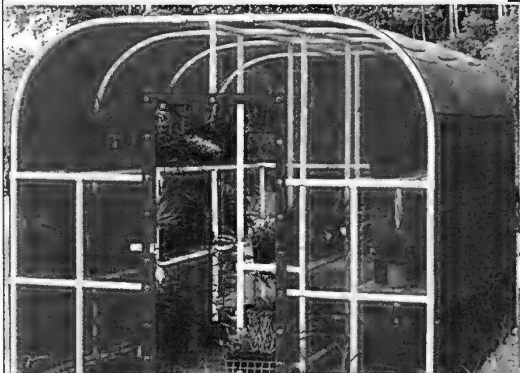
Andy Easton

Salinas, California, USA

Email: andy.easton@sbcglobal.net

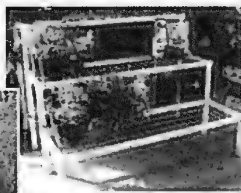
THE PERFECT ORCHID HOUSE

Plant Stands Benches
Custom made →



Perfect for your
orchids

Manufacturers of quality shade & hot houses in varying sizes to suit your requirements. Our modular range offers built-in shelving, long life warranty and easy assembly. Perfect for improving flowering.



AUSSIE
SHADE &
HOT HOUSES

Contact your local agent

1300 88 1143

www.aussieshadehouses.com.au

AT LAST - NO ROT NO RUST NO MAINTENANCE

AOR 010

World Wide
SPECIES ORCHIDS
Mail Order

Flasks, Seedlings, Flowering size.

**Burleigh Park
Orchid Nursery**

54 Hammond Way, Thuringowa, 4815.
Ph 0747 740 008

Lists by mail or email:
ian@speciesorchids.com
www.speciesorchids.com

Propagators of the Rare, Beautiful and
Unusual Orchid Species of the World.
Accredited CITES & Phyto Export

AOR 013

Epigeneium chapaense

– a rarely seen miniature orchid species from Vietnam

Text & photos by David Banks

As long as I can remember, I have had an interest in miniature orchid species. Whilst being drawn to the rare and bizarre, I have also had a passion for those species that have a relatively large bloom in relation to the size of the plant. When you start a collection, you invariably start out with some of the more easily grown and more common species that are entrenched in cultivation. Once these give you success, one often then seeks out other similar but often harder-to-find members of the same genus.

I have grown two different colour forms of the Taiwanese endemic *Epigeneium nakaharae* for almost three decades. Often the specific name appears incorrectly as *nakaharai* in some literature. This is an easily grown species that can tolerate a wide temperature range. In the wild it has an extensive altitudinal range, being found between 700 to 2400 metres. It is an epiphyte, favouring the main trunks of trees in broad-leaf forests. It is an autumn flowering species that was originally described in 1906 as *Dendrobium nakaharae* then subsequently transferred to *Epigeneium* in 1956.

A few years ago, Mark Clements (who has done molecular work on this and related genera) and I were discussing and observing the various members of this genus that I have in cultivation. During these informal chats Mark threw up a name that I was unfamiliar with, *Epigeneium chapaense*. Mark mentioned it was closely related to *Epigeneium nakaharae* with a similar growth habit and floral biology. On a subsequent visit, Mark kindly gave me a piece of his plant.

Epigeneium chapaense appears to be restricted to the highland cloud forests of North Vietnam at altitudes of between 600 –

2200 metres. It blooms in early winter. It was described in 1932, and was controversially reclassified in 2011 as *Dendrobium brunneum*, yet this move has had very restricted botanical or horticultural acceptance.

Cultivation

I grow both of these species in our shadehouses in western Sydney, where they are subjected to a massive 50°C temperature range. Plants have withstood short spells of temperatures in the high 40's in summer and sub-zero temperatures in winter. These orchids prefer a temperature range of between 8°C and 32°C.

These orchids prefer a cool and moist root run, and I have had great success in growing them in shallow pots in a bark based medium (75% medium treated pine bark, 10% coconut chips, 10% peat moss and 5% perlite). I use Port Pots which are sturdy and provide the orchids with excellent drainage. Light levels around the 70% mark seem to be ideal.

They will also grow well on soft treefern slabs, and mounted plants will obviously require more watering during the warmer months. Once plants establish they will quickly develop an extensive root system that will be mostly hidden in the interior of the mount. I feel cork slabs would be too "dry" for these orchids.

Both of these species are well worth tracking down and make a bright addition to the mixed botanical orchid collection.



David Banks

Hills District Orchids

Seven Hills, NSW

Email: david@hillsdistrictorchids.com



Epigeneium chapaense



Epigeneium chapaense
- side view

Epigeneium chapaense
showing growth
and flowering habit



Australian
Orchid
Review



**WELCOMES
EDITORIAL
CONTRIBUTIONS**

Please ensure that all slides, photographs
and electronic files are clearly marked with
the author's name and address

Address editorial to:

David P. Banks (Editor)
Australian Orchid Review
39 Carole Street, Seven Hills
NSW 2147 AUSTRALIA

Email:

david@hillsdistrictorchids.com

ACN 065

Epigeneium nakaharae
- uncommon yellow form



Epigeneium nakaharae
– typical coloured form



Epidendrum (Rose Valley x
Pacific Punchbowl)



Reed-Stemmed Epidendrums

by Roy & Lee Neale, Leroy Orchids, New Zealand

In August 2008 we purchased our first three flasks of 'Compact Epidendrums' from Murray & Jean Shergold of Easy Orchids NSW when they visited New Zealand for the Waitakere Orchid Club's 25th Anniversary Show. These were a serious improvement over the original "Crucifix Orchids" that are often seen as garden plants in eastern Australia.

We had never grown reed-stemmed Epidendrums previously but with a new property and a new growing shed we decided to branch out and try something different. The plants grew from the moment they were deflasked and within 12 months we had our first plants flowering – and what a thrill they were, bright oranges, reds and purples on squat plants and flowers larger than the 'usual' common garden variety. From that time on we have had a succession of plants in flower and the flower heads just seem to get bigger with each flowering. There seems to be no major seasonal impact on the flower timing and as they flower sequentially after the first burst they are out for many months, so our 'Epi' bed seems to have colour all year. From these first three flasks we have achieved two quality awards to date but the majority of plants were sold before flowering.

Inspired by what we saw from these first flasks we imported a further ten flasks from Cal Orchid, California, in October 2011. Just over two years on, we really feel like the 'Colour Kittens' as we now have such a selection of colours. We have full round heads of flowers, and others with lesser heads but bigger flowers, along with many different shaped intriguing lips, all this on compact plants. The timing was perfect for the 7th NZ National Orchid Expo in New Plymouth (in early November 2013) where we released these plants for sale, and our display consisting mainly of Epidendrums won the Best Commercial Display.

We grow our plants in a fairly stable environment down to 5°C in winter and up to 30°C in summer. They don't like frost, and prolonged cold gives them spotty leaves otherwise they aren't fussy. We grow them in No 3 Kiwi Orchid Bark (that is now available in Australia) to which we add some pumice and washed shell, the same mix for all pot sizes except for when we deflask which is into No 2 grade bark (radiata pine bark). We water every second day in summer always with fertiliser added at CF6. During the summer growing period we apply calcium nitrate monthly. In the winter we ensure we water in the morning, about every 6 - 8 days and use pure rain water.

Our plants grow in bright filtered light with approximately 50% shade to the stage where the leaves are showing tinges of red. We have fans circulating the air at all times.

Once a stem has flowered cut it back by about a third to encourage basal shoots. Repot when the roots fill the pot but avoid over-potting. Be on the alert for scale,

mealy bug and aphids and treat immediately if you spy any of these pests.

We have found these plants very easy to grow and very exciting with the colour range now available, we look forward now to producing our own seedlings. (Thanks to David Banks for the photographs he took of our plants at the NZ Expo that accompany these notes.)

Roy & Lee Neale

Leroy Orchids

Whenuapai, New Zealand

Email: leeandroy@ihug.co.nz



KIWI ORCHID BARK & RCRA ORCHID CHAR

KIWI ORCHID BARK— HARD, CHUNKY & FREE OF FINES

Kiwi Orchid Bark is made from renewable Pinus Radiata bark and is a very clean orchid growing media. RCRA Orchid Char is the best quality char from Charleville in Qld.

KIWI ORCHID BARK available in 10 & 50 litre bags in the following sizes

No 2 ... 3-8mm No 3 ... 8-20mm No 4 ... 20-25mm No 5 ... 25-50mm (50 litre bag only)

RCRA ORCHID CHAR available in 10 litre and 20kg bags in 5mm, 10mm, 15mm, and 20mm uniformly graded sizes.

Stock is available for immediate delivery

For supplies in NSW contact

Kiwi Orchid Bark NSW

Bob Bishop NSW Distributor

Mob 0413 702 335

Email: orchidbark@optusnet.com.au

For supplies in QLD contact

Orchidaceous Supplies

Grahame & Margaret Muller

Mob 0408 076 511

Email: supplies@orchidaceousupplies.com.au



Epidendrum group
7th NZ National Orchid Expo
in early November 2013



Epidendrum display
by Leroy Orchids,
7th NZ National Orchid Expo
in New Plymouth



Epidendrum (Pacific Sunset x
Pacific Punch)



Epidendrum Pacific Whimsy





Epidendrum display at the
7th NZ National Orchid Expo

Grow With Us



American Orchid Society

.....
Beginner or expert, share your passion
for orchids by becoming a member of the
American Orchid Society today!
.....

For American Orchid Society
membership information
and benefits,
please go to www.aos.org,
e-mail TheAOS@aos.org
or call 305-740-2010.

ARANBEEM ORCHIDS

Mail Order Specialists

Nursery Open:

1st Saturday of Month

Other times by appointment

Phone / Mail Orders:

(07) 3888 3637 (ph)

(07) 3888 5271 (fax)

aranbeem@bigpond.net.au

Priests Road (PO Box 96)

Deception Bay

Brisbane Qld 4508

Roy Neale & Rachael Banks
next to the winning display
by Leroy Orchids at the
7th NZ National Orchid Expo
in New Plymouth.
November 2013



Mingara Orchid Club Inc. presents the 10th annual

FREE ENTRY Mingara Orchid Fair & Show

Saturday 28th June - Sunday 29th June 2014

On the beautiful Central Coast Mingara Recreation Club Tumbi Umbi

Orchid vendors: • Bromeliads Australia • B & T Ferns and Orchids • Burbank Orchids
• Coachwood Nurseries • Dark Star Orchids • Easy Orchids • Ezi-gro Orchids • David Keneally Orchids
• Fong Ping Orchids • Kawana Gardens Nursery • Nicky's Slippers • Orchid Care Services • Orchids on Newbold
• Orchid Productions • Johnson Orchids • Orchid Species Plus • Rosella Orchids • The Orchid Tray Company
• Tinonee Orchid Nursery • Woolf Orchid Culture • Ty Tags

All under 1 roof in air conditioned comfort – abundant free parking and easy wheelchair access!
Plenty of great eating places with fabulous orchid show, meal, drink and more deals for a weekend stay.
Competitive displays by orchid societies and individual growers – floral art competition.

Bus group incentives or easy access by public transport

For more information contact Ralph (02) 4328 2008, email mingaraorchidclub@gmail.com
Or www.mingara.com.au www.visitcentralcoast.com.au

Sick of writing plant tags?

- THEN WE CAN HELP YOU

- Small Runs of printed tags
- Great prices
- Quick Turn-a-round

(apt) aussie plant tags

Contact David or Pauline Brewster at
Email: apt@tags.net.au
Web: www.tags.net.au

AOR 020

P.O. Box 1074 Tel: 0401 765 604
Cowes Vic...3922 Fax: (03) 9720 8125

Acianthus saxatilis (Diurideae: Orchidaceae), a new rare species from the Border Ranges region of eastern Australia

by David L. Jones and Mark A. Clements

Abstract

A previously overlooked species, *Acianthus saxatilis* (Acianthinae: Diurideae), from the Queensland - New South Wales Border Ranges region is described as new. Morphological studies and comparison of DNA sequence data from other *Acianthus* species confirms the identity and phylogenetic position of this very distinct and extremely rare new species.

A routine search of herbarium specimens in the BRI herbarium uncovered a specimen of an *Acianthus* collected in the Springbrook area of south-eastern Queensland in the 1950's by David Hockings. The collection consists of 4 specimens with dehiscent capsules and withered flowers. The flowers, which clearly had segments larger than those typically present on any known Australian species, had some similarities to *A. cymbaliformis* and *A. grandiflorus*, both from New Caledonia. The species appeared to be new but there was a possibility that this collection might represent an Australian outlier of a New Caledonian species. Kores (1989) in his presumptive treatment of the genus reported that *Acianthella amplexicaulis* (as *Acianthus amplexicaulis*) occurred in both Australia and New Caledonia based on a single misidentified collection in New Caledonia.

Examination of a carefully reconstituted flower taken from one of the Springbrook specimens revealed that it matched none of the New Caledonian species, nor any known Australian species. Subsequent examination of fresh floral material from two very small populations along the Border Ranges region of Queensland and New South Wales showed the morphological distinctiveness of this species. The existence and location of this species was kept secret while research was undertaken to determine the phylogenetic position to the remainder of the Acianthinae through DNA analyses. This species is here described as new on the basis of morphological and molecular research.

Taxonomy

Acianthus saxatilis D.L.Jones & M.A.Clem., *spec. nov.*

Similar to *Acianthus fornicatus* R.Br. but differing by its larger light green leaf; larger prominent floral bracts; shorter inflorescence; larger light green and brown flowers; larger, very broad cucullate dorsal sepal; broader lateral sepals held horizontally in a close pair directly beneath the labellum; petals spreading to upswept with an attenuate apex; and, an ovate-lanceolate labellum which projects correctly forwards from the column base.

Typus: Queensland; Lightning Falls, Lamington National Park, 12 Feb. 2010, *M.T.Mathieson MTM0606*, *L.Rintoul* and *M.Pears* (holo BRI! AQ792112).

Description: Glabrous, terrestrial, tuberous herb growing in small colonies. Stem erect to slightly bent forward, widest and darkest green at base, 40-90 mm tall, 1.5-3 mm thick. Leaf porrect, cordate, 38-70 x 20-90 mm, light green above, reddish green to light greenish purple beneath, entire; veins not prominent; apex attenuate to acuminate. Raceme erect, 3-8 cm tall, slender, thinner than the stem, 1-5[-8]-flowered. Floral bracts prominent, cordate, 4-12 x 4-13 mm, light green, foliose. Ovary linear, 8-10 x 1-2 mm, curved, light green. Flowers largest for the genus, porrect, 10-13 x 5-7 mm, light green with faint light brown margins on sepals; labellum light greenish-brown to greenish-yellow with light brown margins, brown callus and darker brown apex. Dorsal sepal ovate-lanceolate, 8-12 x 4.5-8 mm, cucullate, acute to apiculate. Lateral sepals connate at the very base then free, projected obliquely forwards below the labellum and forming a flat to slightly concave platform-like structure; each sepal asymmetrically oblanceolate, 9.5-14 x 3-3.5 mm, narrowed to the base. Petals porrect to upswept, partially hidden by the dorsal sepal, obliquely lanceolate, falcate, 7-9 x c. 3 mm, acuminate. Labellum sessile, obliquely porrect, 8.5-10 x 4.5-5 mm, elliptical to elliptical lanceolate, cymbiforme, thickest in basal half, flat to shallowly concave; margins entire or distally irregular; apex acute to subacute or apiculate. Callus consisting of paired basal glands and a narrow brownish central band; glands mostly hidden, tonsil-like, each 1.5-2 mm long; central band c. 1 mm wide, restricted to proximal two-thirds of labellum. Column erect, 4.5-6.5 mm long, shallowly curved, green. Anther 0.6-0.8 mm long, rounded, with light brown band, without a rostrum. Stigma elliptical, c. 0.7-0.8 mm wide. Pollinarium c. 0.8 mm wide, consisting of two hemipollinaria, each comprised of a small hemiviscidium and four pollinia in two unequal pairs; viscidium c. 0.2 mm wide; pollinia clavoid, light yellow, the smaller four c. 0.35 mm long, the larger four c. 0.5 mm long. Capsules ellipsoid, 10-12 x c. 3 mm. **Figs 1 & 2.**

Distribution and Habitat: To date this species is known only from two localities in the Border Ranges region of south-eastern Queensland and north-eastern New South Wales. It is extremely localised and forms relatively small colonies. At the Lightning Falls locality it grows at about 1,100m alt., under ferns and shrubs among wet basaltic rocks in dense subtropical rainforest. At the New South Wales locality it grows at about 900m alt. among rocks (probably rhyolite) in moss gardens under tall Hoop Pines (*Araucaria cunninghamiana*). The soil at both localities is a brown loam.

Flowering Period: February to May.

Recognition: *Acianthus saxatilis* has flowers like no other Australian species of *Acianthus* and is unlikely to be confused with any other Australian orchid. It can be immediately recognised by its relatively large leaf, large foliose floral bracts, large greenish to greenish and brown flowers, very broad cucullate dorsal sepal, broad lateral sepals held horizontally in a close pair directly beneath and subtending the labellum, spreading to upswept petals which have an attenuate apex and an ovate-lanceolate labellum which projects correctly forwards from the column base. The labellum has a pair of prostrate tonsil-like glands at the base, an abbreviated central channel which extends about three-quarters of the labellum length and an acute to apiculate apex.

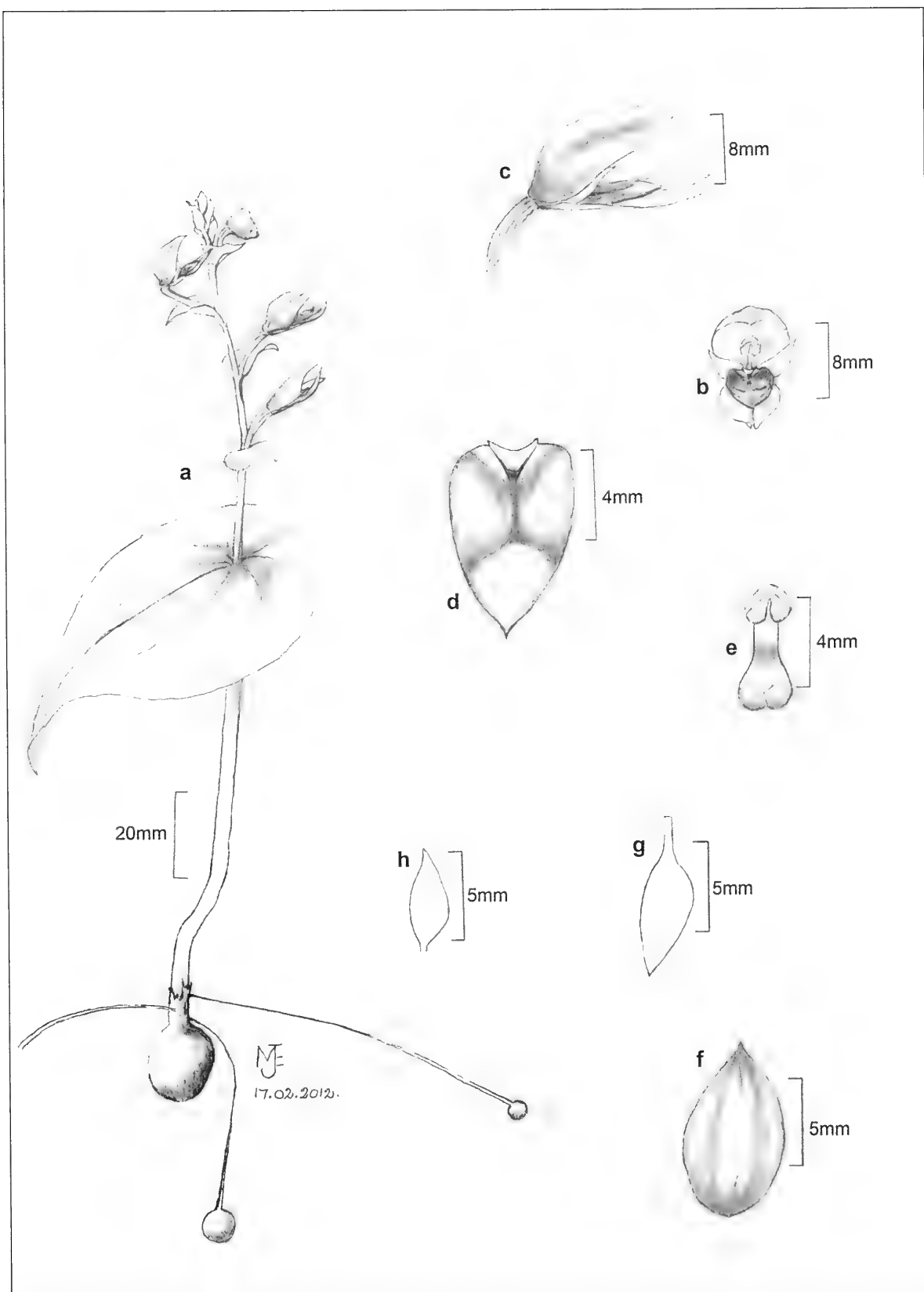


Figure 1. *Acianthus saxatilis*, cult. ex. south-east of Best of All Lookout, New South Wales, B. Dalyell, drawn by Jean Egan, 17 Feb. 2012.
a. flowering plant; b. flower from front; c. flower from side; d. labellum from above, flattened; e. column from front; f. dorsal sepal;
g. lateral sepal; h. petal.

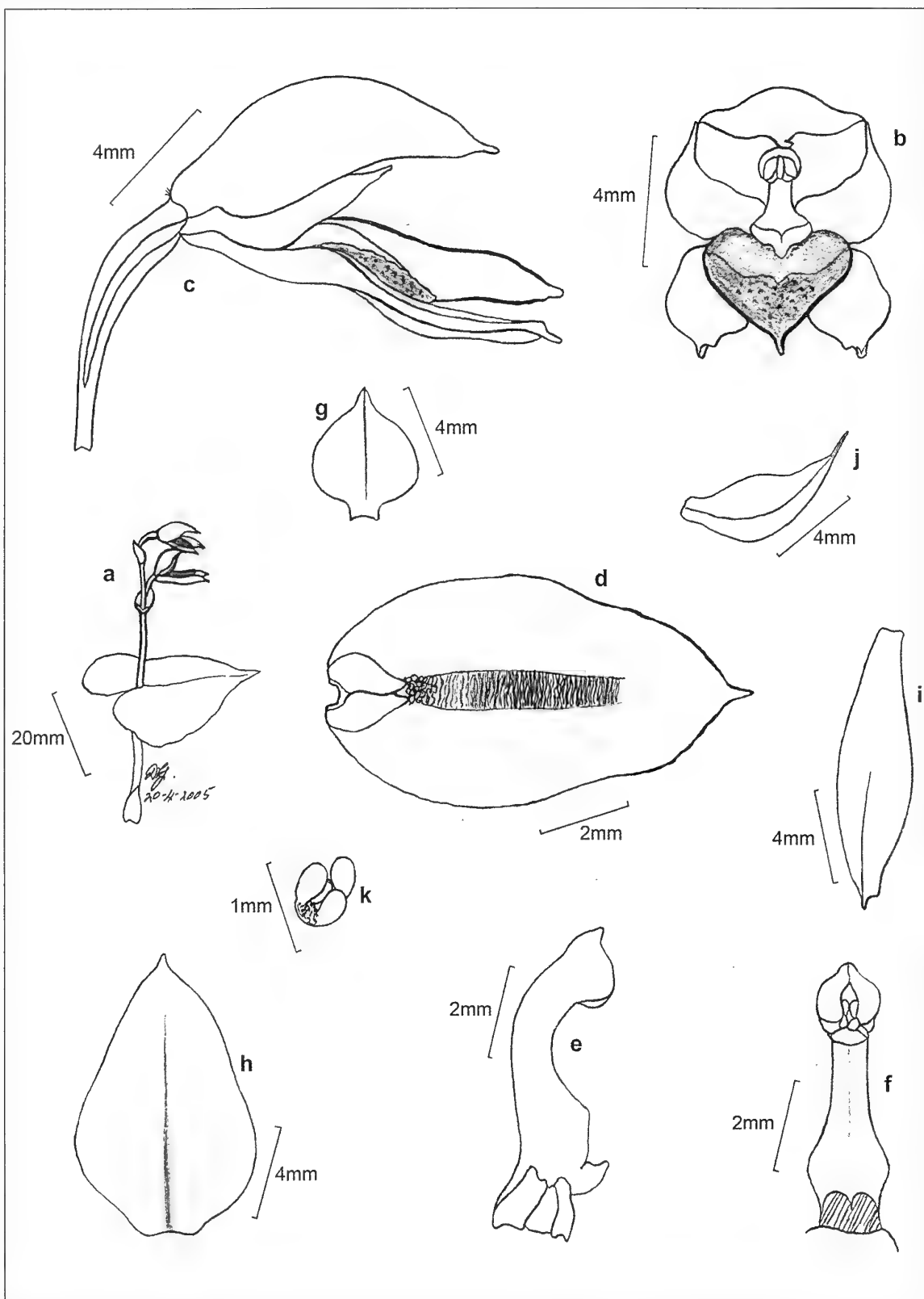


Figure 2. *Acianthus saxatilis*, cult. ex Lightning Falls, Queensland, B.Dalyell, drawn by D.L.Jones 20 April 2005.

a. flowering plant; b. flower from front; c. flower from side; d. labellum from above; e. column from side; f. column from front; g. bract; h. dorsal sepal; i. lateral sepal; j. petal; k. pollinarium.



Above:
Figure 3. *Acianthus saxatilis*: from Lightning Falls
 (photo © L.Copeland)

Right:
Figure 4. *Acianthus saxatilis*: from near Best of All Lookout
 (photo © L.Copeland)



Notes: *Acianthus saxatilis* was first collected by David Hockings in the Springbrook area of south-eastern Queensland in June 1953 and the specimen later lodged at BRI. One of us (MAC) recognised the unusual nature of its floral form even in closed pressed flowers, akin to several of the 12 endemic species of *Acianthus* (now *Acianthella*) from New Caledonia. Examination of a carefully reconstituted flower revealed that it was unique, representing a possible new Australian species. No other collections were known until live material was sent to the senior author by Verne Charlesworth in 2003. Further material was received subsequently from Bruce Dalryell.

Nuclear DNA sequences obtained by one of us (MAC) from leaf material collected from these two populations confirmed that *A. saxatilis* differs from all other species of *Acianthus* by possession of 14 unique nuclear ribosomal DNA bases in the internal transcribed spacer (ITS) region.



Figure 5. *Acianthus saxatilis*:
from Lightning Falls
(photo © D.L. Jones)



Figure 6. *Acianthus saxatilis*:
from Lightning Falls
(photo © D.L. Jones)



Above:
Figure 7. *Acianthus saxatilis*: from Lightning Falls
 (photo © M.A. Clements)

Additionally the new species belongs to the genus *Acianthus* (Acianthinae: Diurideae) and not with any of the other genera in that subtribe. It occupies an intermediate phylogenetic position between other species of *Acianthus* and *Nemacianthus caudatus* rendering the concept of the latter genus questionable. Its genetic position confirms that it possesses morphological character traits ancestral to the remainder of *Acianthus*.

The flowers may be self pollinating or at least partially autogamous since one specimen had a pair of pollinia extruding from the anther cap and curving downwards to contact the dorsal surface of the stigma. Nothing is known about its mycorrhizal relationships.

Conservation status: Extremely rare but known to be conserved in Lamington National Park; threatened by competition from colonies of Mistflower (*Ageratina riparia*) at the Springbrook locality; suggest 2Ec according to Briggs & Leigh (1996).

Etymology: From the Latin *saxatilis*, dwelling or found among rocks; in reference to the rocky habitats where this species has been found.

Cultivation: *Acianthus saxatilis* is easily cultivated in live sphagnum moss, taking care to allow for a short dry period when the plants die back to tubers in the early summer months. Flowering size plants reproduce one to several new tubers each growing season (Helen Richards pers. comm.).

Specimens examined: cultivated ex New South Wales: SE of 'Best of all Lookout', 23 June 2004, B.Dalyell (ORG 4489) (CANB!).

Dark Star Orchids

**Bulbophyllums, Dendrochilums, Lycastes,
 Stanhopeas, Paphs, Africans and lots more**

**RARE AND UNUSUAL SPECIES
 AND SOME SELECTED HYBRIDS**

Please check our newly updated website for our latest releases

Hans Schaible

www.darkstarorchids.com.au

PO Box 114 Bowraville NSW 2449

Telephone/Fax (02) 6564 4088

darkstarorchids@bordnet.com.au

AOR 126

Acknowledgements: We thank the Curator of BRI for access to the collection and loan of specimens. Special thanks to Verne Charlesworth and Bruce Dalyell for the collection of specimens, Helen Richards for her expertise in cultivating the plants, Jean Egan for the illustration of a specimen from the Springbrook population and preparing the drawing of the Lightning Falls population for publication, and Lachlan Copeland for use of his images.

References:

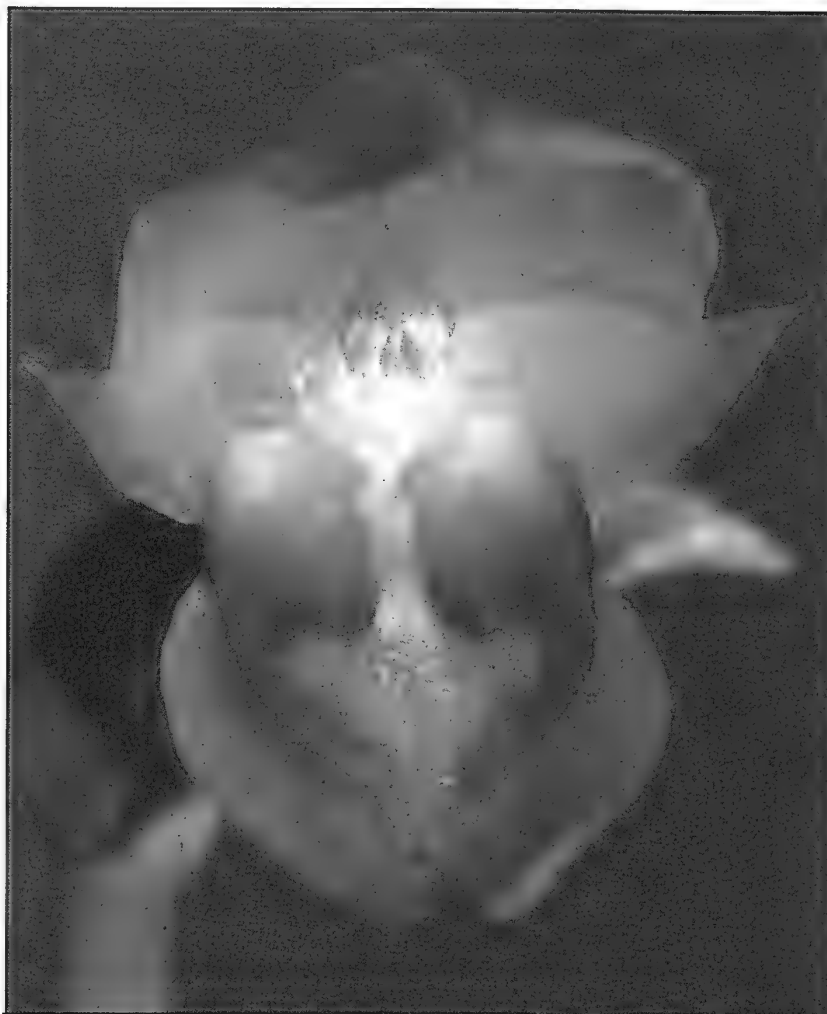
- Briggs, J.D. & Leigh, J.H. (1996). *Rare or Threatened Australian Plants*, Revised Edition, CSIRO and Australian Nature Conservation Agency.
- Kores, P.J. (1995). A systematic study of the genus *Acianthus* (Orchidaceae: Diurideae). *Allertonia* 7: 87-220.

David L. Jones
Kalaru, NSW, 2550
Email: dabajones@bigpond.com

Mark A. Clements
Centre for Australian National Biodiversity Research
GPO Box 1600
Canberra, ACT, 2601
Email: Mark.Clements@csiro.au

Below:

Figure 9. *Acianthus saxatilis*: ORG 4854
(photo © M.A. Clements)



Above:

Figure 8. *Acianthus saxatilis*: ORG 4854
(photo © M.A. Clements)

ORCHIDACEOUS BOOKS

Suppliers of Fine Orchid Literature

**Large selection of new and
pre-owned orchid books**

Browse and shop at our secure website
www.orchidaceousbooks.com.au

*We attend orchid fairs in
Brisbane, Sydney and Melbourne*

Grahame & Margaret Muller
P.O. Box 4192, Tinana, Qld. 4650
Ph: 07 4122 1251 Fax: 07 4122 4539
Email: books@orchidaceousbooks.com.au

ACR 11



PLANT HORMONES FOR ORCHIDS

Formulated by Dr James Brasch and now
made in Australia by Flora Laboratories
Keikigrow Plus, Paph Grow,
Floral Boost & Keikiroot

www.floralaboratories.com.au

Phone 03-9584-2087

Email office: floral@floralaboratories.com.au

The Enigmatic (?) Case of the Most Beautiful *Phragmipedium popowii*

by Prof. Dr. Guido J. Braem

In a detailed article a decade ago in 2004, Braem, Öhlund and Quené clarified the taxonomic situation around the *Phragmipedium caudatum* complex, popularly referred to as the “long-petaled phragmipediums”. At least we thought we had clarified the issue as, for this publication, we had gone back to the original literature, including the article written in German by Heinrich Gustav Reichenbach, in our circles usually referred to as Reichenbach fil. In that article, we came to the conclusion that the group comprised five valid species being (in alphabetical order): *Phragmipedium caudatum* (Lindley) Rolfe (1896), *Phragmipedium exstaminodium* Castañó, Hágsater & Aguirre (1984), *Phragmipedium lindenii* (Lindley) Dressler & N.H. Williams (1975), *Phragmipedium popowii* Braem, Öhlund & Quené (2004), and *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay (1979). This decision was also a confirmation of the article of Braem & Öhlund (2004) in which we showed that “*Cypripedium humboldtii*” (as “*Humboldtii*”) had never been published, and that in consequence, *Phragmipedium humboldtii*, as published by Atwood & Dressler in 1998, was based on a linguistic misunderstanding and had to be reduced to a *nomen illegitimum*.

It did not take long for criticism to surface. Robert L. Dressler, one of the most revered orchid taxonomists, has hitherto not been willing to accept that he and his co-author Atwood, both having no language comprehension in respect to German, have made a mistake, and the late Eric Christenson dug up an alleged *Selenipedium warszewiczii* from Reichenbach fil. which he transferred to the genus *Phragmipedium* (Christenson 2006). A confused lecture by Quené for the British Paphiopedilum Society brought further chaos. In the meantime, Dressler valiantly defended “his” *Phragmipedium humboldtii* in various articles (Dressler 2005, Populin & Dressler 2011, Populin & Dressler 2012), and from Mexico came an elaborate article dealing with *Phragmipedium warszewiczii* (Reichenbach fil.) Christenson (Solano-Gómez & Martínez-Ovando 2011).

So, who is right? Dressler & Co? Christenson? Braem & Öhlund?

I think it is best to let the public decide, and for that reason, I have again gone back to the original literature.

The case of *Phragmipedium humboldtii*

Phragmipedium humboldtii Atwood & Dressler is based on the *Botanische Zeitung*. In the issue published on 1 October 1852, starting with page 689, we find an article entitled *Neue Orchideen der Expedition des Herrn J. de Warszewicz*. In English that means: *New Orchids from the Expedition of J. de Warszewicz*. The article was authored by Heinrich Gustav Reichenbach.

Before we go into detail regarding the pertinent sections of the text, we should note the spelling of the name used by Reichenbach. The official name of the researcher and traveller in question is Józef Warszewicz Ritter von Rawicz. Von Warszewicz (1812-1866) was a member of the Polish nobility and therefore carried the French nobiliary particle “de”, which in German was translated to “von”, and is often abbreviated as “v.” However, one cannot correctly interpret this abbreviation without paying attention to the context. In German, the “v.” can also mean “variety”; in French it can mean “variety” or “voir” = “see”.

The text pertinent to *Phragmipedium humboldtii* is found on page 691 and is here faithfully reproduced:

Cypripedium Humboldtii Wszwcz. Ich besitze ein Exemplar und eine Abbildung vom Autor. Ich verglich dieselbe mit den Exemplaren des *C. caudatum* von Ruiz, mit der Abbildung in Hook. Ic. VII. 638. Paxton FL. G. 9. Auch ich glaube an mehrere Arten, wie Hr. von W. - Die Pflanze unsres Reisenden ist aber genau dieselbe, welche in Hook. Ic. vorliegt; dieselbe, welche Ruiz sammelte. Nach einer schlechten Blüthe letzterer stellte Hr. Prof. Lindley sein *C. caudatum* auf: ich kenne dieselbe Pflanze in guten Exemplaren, also genauer als der Autor selbst und behalte für sie den Namen. - Von dieser unterscheidet sich die Pflanze Fl. Gard. t. 9. vor allem durch ein quer zweilappiges steriles Staubgefäss. Die Abbildung ist sehr deutlich und Hr. Prof. L. sagt ausdrücklich: *stamina sterili transversa bilobo apicibus setosis*. Die Abbildung in Hook. Ic. Dagegen zeigt deutlich dasselbe Organ dreilappig, wie ich es immer gefunden. Obschon ich höchst selten Pflanzen nach fremden Abbildungen und Beschreibungen unterscheide, so versteht es sich doch von selbst, dass ich einer Abbildung und Beschreibung des Hrn. Prof. Lindley vertraue. - Ich setze die Diagnosen beider so:

Cypr. caudatum Lindl. Orch. 5. 31.: phyllo supremo lato oblongo acuto, inferiori subaequali, latiori, phyllis internis a latiori basi linearibus longissimis, calceo oblongo ventricoso abbreviato margine ostii pilis velutino, stamine sterili trilobo. - Hook. Ic. l. c. *C. Humboldtii* v. Wszwcz. Blüthen stark gelb, rothnervig, Lippe purpurfleckig. In Peruv. Andium nemoribus. Ruiz ! (Herb. Berol.!) In Quercubus montium Chiriqui. De Warszewicz !

We must stress that the article was not authored by von Warszewicz. In fact, only a single article about orchids is known from von Warszewicz. It was published in the *Allgemeine Gartenzeitung*, No. 40 (5 October 1850), pp. 315 f. and deals with *Trichopilia suavis* Lindley. There is no publication by von Warszewicz about any *Phragmipedium* and therefore, the issue is very simple: there is no *Cypripedium humboldtii* Warszewicz. The citation “*Cypripedium humboldtii* Warsz., Bot. Zeitung (Berlin) 10: 691. 1852” as given by Solano-Gómez

and Martínez-Ovando (2011) is incorrect as the article referred to was written by Heinrich Gustav Reichenbach.

Nevertheless, Populin & Dressler (2011, 2012) insist that the entity was validly published by Reichenbach in said article. That is simply wrong, as we wrote in 2004, and is due to the incapability of Dressler to comprehend a German text and his refusal to ask someone versed in German to explain the issue to him.

I therefore supply a translation of the entire text. I divide the text in sections to make the explanations clearer:

Cypripedium Humboldtii Wszwcz. Ich besitze ein Exemplar und eine Abbildung vom Autor. Ich verglich dieselbe mit den Exemplaren des *C. caudatum* von Ruiz, mit der Abbildung in Hook. Ic. VII. 638. Paxton FL. G. 9. Auch ich glaube an mehrere Arten, wie Hr. von W. - Die Pflanze unsres Reisenden ist aber genau dieselbe, welche in Hook. Ic. vorliegt; dieselbe, welche Ruiz sammelte.

Cypripedium Humboldtii Wszwcz. I am in possession of a specimen and a drawing by the author. I have compared this material with the specimens of *Cypripedium caudatum* von Ruiz and with the illustration from Hooker's *Icones* VII. 638, and the illustration from *Paxton's Flower Garden*, 9. I also believe that there is more than one species, as does Mr. von Warszewicz. - The plant of our traveller is, however, fully identical with the one that is illustrated in Hooker's *Icones* and which was collected by Ruiz.

Explanation:

(1) Reichenbach fil.'s "specimens" are dried herbarium materials.

(2) The plants pictured in Hooker's *Icones* and *Paxton's Flower Garden* are indeed different and do not belong to a single species.

(3) The "traveller" is Józef Warszewicz Ritter von Rawicz.

(4) Reichenbach clearly states that von Warszewicz's plant is fully identical with *Cypripedium caudatum* as pictured by Hooker in his *Icones* and as collected by Ruiz.

From this section alone, there can be no question that Reichenbach *did not describe nor did he intend to describe* the plants he refers to as "*Cypripedium Humboldtii* Wszwcz." as a separate species. He simply wrote about a plant that von Warszewicz has referred to as "*Cypripedium Humboldtii*."

Nach einer schlechten Blüthe letzterer stellte Hr. Prof. Lindley sein *C. caudatum* auf: ich kenne dieselbe Pflanze in guten Exemplaren, also genauer als der Autor selbst und behalte für sie den Namen. - Von dieser unterscheidet sich die Pflanze Fl. Gard. t. 9. vor allem durch ein quer zweilappiges steriles Staubgefäss. Die Abbildung ist sehr deutlich und Hr. Prof. L. sagt ausdrücklich: *stamina sterili transverso bilobo apicibus setosis*. Die Abbildung in Hook. Ic. Dagegen zeigt deutlich dasselbe Organ dreilappig, wie ich es immer gefunden. Obschon ich höchst selten Pflanzen nach fremden Abbildungen und Beschreibungen unterscheide, so versteht es sich doch von selbst, dass ich einer Abbildung und Beschreibung des Hrn. Prof. Lindley vertraue. - Ich setze die Diagnosen beider so:

It was on the basis of a damaged flower of this same species that Prof. Lindley described his *Cypripedium caudatum*. I know this same plant from good specimens, and therefore I know this plant better than the author and retain the name allocated by him. The plant depicted in *Paxton's Flower Garden*, t. 9, differs from the former especially by a transversely two-lobed sterile anther. The illustration is very clear and Prof. Lindley explicitly writes: *stamina sterili transverso bilobo apicibus setosis*.

The illustration in Hooker's *Icones*, on the other hand, distinctly shows that the same organ is three-lobed, and that is how I always found it. Although I rarely differentiate between plants on the basis of illustrations and descriptions that have not been made by me, it is evident that I trust an illustration and a description from Prof. Lindley. - Therefore I define the diagnosis as follows:

Explanation:

(1) Reichenbach fil. makes it clear that he knows *Cypr. caudatum* well.

(2) Reichenbach clarifies that when he and von Warszewicz speak of "different species", they mean *Cypripedium caudatum* and the plant depicted in *Paxton's Flower Garden*, and that these plants can be differentiated by the staminode which is trilobate in *Cypr. caudatum* and bilobate in the plant depicted in *Paxton's Flower Garden*. Thus, his reference to "more than one species" has nothing to do with "*Cypripedium Humboldtii* Wszwcz."

Cypr. caudatum Lindl. Orch. 5. 31.: phyllo supremo lato oblongo acuto, inferiori subaequali, latiori, phyllis internis a latiori basi linearibus longissimis, calceo oblongo ventricoso abbreviato margine ostii pilis velutino, stamine sterili trilobo. - Hook. Ic. l. c. *C. Humboldtii* v. Wszwcz." Blüthen stark gelb, rothnervig, Lippe purpurfleckig." In Peruv. Andium nemoribus. Ruiz! (Herb. Berol.!) In Quercubus montium Chiriquí. De Warszewicz!

Explanation:

(1) The diagnosis refers to *Cypripedium caudatum* as described by Lindley and the plant from von Warszewicz as a synonym thereof, and Reichenbach quotes a short description that probably is taken from the notes he got from von Warszewicz. "Flower deep yellow, veined red, lip spotted with purple."

(2) "*In Peruv. Andium nemoribus. Ruiz!*" means that the plant was collected by Ruiz in the forests of the Peruvian Andes. The "!" indicated that Reichenbach actually had seen the specimen.

(3) "*In Quercubus montium Chiriquí. De Warszewicz!*" means that the plant was collected in the oak forests of the mountains of Chiriquí by Warszewicz, and again, the "!" indicated that Reichenbach actually saw the specimen. Chiriquí is a province on the western coast of Panama.

Populin and Dressler (2011, p. 167) agree with the above, and write:

"The rationale of Braem and Öhlund (2004a, 2004b) who argued that Reichenbach f. (1852) never described nor intended to describe *C. humboldtii*, because he considered it a synonym, is likely correct."

Nevertheless, in their taxonomy section (page 168) they claim that "*Cypripedium humboldtii* Warsz., Bot. Zeitung (Berlin) 10(40): 691. 1852" is the basionym of *Phragmipedium humboldtii*, an interpretation that is completely incongruous. As *Cypripedium humboldtii* was never described, it is a *nomen nudum* and cannot be a basionym.

In the same article, Populin and Dressler state that Linden & Reichenbach fil. (1860) and Reichenbach fil. (1873) "gave recognition ... to the same entity with the name *Selenipedium warszewiczii* Rchb. f."

The citation Linden & Reichenbach fil. (1860) refers to the *Pescatorea*. There, we find *Selenipedium caudatum* as t. 24 (not as t. 86 as cited by Populin & Dressler [There are only 48 plates in the *Pescatorea*]). As "Synonym", Linden & Reichenbach fil. list "*Cypripedium Humboldtii* Warszewicz, in *Hortis*."



Fig. 1. *Phragmipedium caudatum* (Lindley) Rolfe (1896)
Plate 658/659 of William Jackson Hooker's *Icones Plantarum* depicting the plant collected by Ruiz and described by Lindley as *Cypripedium caudatum* in 1844.



Above:
Fig. 2. *Phragmipedium caudatum* (Lindley) Rolfe (1896) – courtesy of John Varigos

Thus, there is again no description and most certainly no validation as a species. Instead, Reichenbach fil.'s 1852 decision to consider the plant sent by von Warszewicz as a synonym of *caudatum* (here as *Selenipedium caudatum*) is confirmed.

The citation Reichenbach fil. (1873) refers to the second volume of the *Xenia Orchidacea*. There, on page 189, we find a text entitled "*Selenipedium wallisii*" and in his Latin diagnosis, Reichenbach writes;

"Affine *Selenipedio caudato* Rchb. fil et *Warszewiczii* Rchb. fil (caudato roseo Hort. tepalis calvis.)"

In English: Related to *Selenipedium caudatum* Rchb. fil. and *warszewiczii* Rchb. fil. (caudatum roseum Hort. tepals without hairs).

In this case, Reichenbach *does not even mention* the name "*Humboldtii*".

Thus there can be no doubt that "*Cypripedium Humboldtii*" is a *nomen nudum*, and that therefore *Phragmipedium humboldtii* (Warsz.) Atwood & Dressler (1998) is a *nomen illegitimum*.

Below:
Fig. 3. *Phragmipedium caudatum* (Lindley) Rolfe (1896)
– courtesy of Robert-Jan Quené and Orchids Limited



Australian
Orchid
Review



**WELCOMES
EDITORIAL
CONTRIBUTIONS**

*Please ensure that all slides, photographs
and electronic files are clearly marked with
the author's name and address*

Address editorial to:
David P. Banks (Editor)
Australian Orchid Review
39 Carole Street, Seven Hills
NSW 2147 AUSTRALIA

Email:
david@hillsdistrictorchids.com

AOR 065

The case of *Phragmipedium warszewiczii*

Phragmipedium warszewiczii (Reich. fil.) Christenson was published in the *Journal für den Orchideenfreund*, 13(2): 141-143 (2006). In that article, the late Eric Christenson lists "*Selenipedium warszewiczii* (Rchb. f.), *Xemia* [sic.] *Orchid*. 2: 189. 1873" as basionym.

As we have discussed above, in that article, Reichenbach states only that his *Selenipedium wallisii* is related to [*Selenipedium*] "*Warszewiczii*". Nowhere can we find a description of a *Selenipedium warszewiczii*, and therefore, there can be no doubt that *Phragmipedium warszewiczii* is a *nomen nudum*.

The case of *Phragmipedium wallisii* / *warszewiczianum*

As seen above, Reichenbach, in his 1852 article, established that the plant depicted in *Paxton's Flower Garden*, t. 9, was not identical with the plant sent by von Warszewicz, and thus not identical with Lindley's original *Cypripedium caudatum*, as he clearly states that the Warszewicz plant was identical with *Cypripedium caudatum*. Thus there was need to describe the plant depicted by Lindley and Paxton, as that plant could not claim the name "*Cypripedium caudatum*" since that name was taken by the plant published by Lindley in 1840. He therefore described this "second species" on page 692.

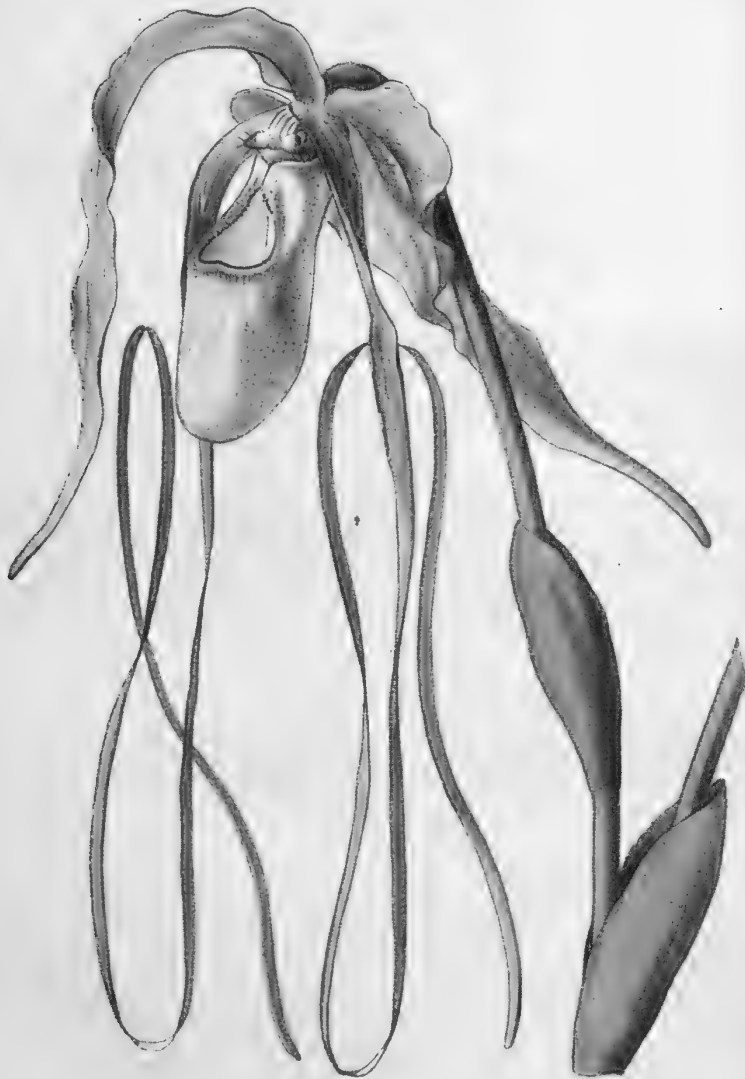
C. warszewiczianum: phyllo supremo oblong acuto-acuminato, inferiori subaequali, basi latiori, longioli, phyllis internis a latiori basi linearibus longissimis; calceo oblongo margine versus basin glanduloso serrato, stamina sterili transverso bilobo apicibus setosis. *Cyp. caudatum* Lindl. - *Fl. Gard*, 19. p.31. - Wahrscheinlich ist dies das *C. caudatum*, welches in Sümpfen wächst (marshy places.). [the English comment is part of Reichenbach's text.]

After the Latin description, the correct translation of the German section of the passage is: "This is probably the *C. caudatum* that grows in marshy places."

This, however, means that the name *Cypripedium warszewiczianum* is the correct designation for the plant that for decades was erroneously referred to as *Paphiopedilum* (*Cypripedium*) *wallisii*. This was recognised by Leslie A. Garay, who transferred Reichenbach's taxon properly to the genus *Phragmipedium* as *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay in *Orchid Digest* (1979).

Left:

Fig. 4. *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay (1979). This is Plate 9 of the first volume of *Paxton's Flower Garden* (1850), depicting a plant again named *Cypripedium caudatum* by Lindley. Obviously, this plant differs from the one published by Hooker in his *Icones Plantarum* (fig. 1) 6 years earlier and needed to be given a new name. Therefore, Reichenbach fil. named this plant *Cypripedium warszewiczianum* in (1852). The plant, however, was erroneously called *Cypripedium wallisii* (later *Phragmipedium wallisii*) in horticulture and literature for more than a century, until the error was detected in 1979 by Leslie A. Garay. Although Garay corrected the error, and transferred the taxon to the Genus *Phragmipedium* as *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay, most orchid growers continue to use the erroneous designation. The correct designation is *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay with *Phragmipedium wallisii* as its synonym.





Left:
Fig. 5. *Phragmipedium warszewiczianum*
 (Reichenbach fil.) Garay (1979)
 – courtesy of Robert-Jan Quené
 and Orchids Limited

Below:
Fig. 6. *Phragmipedium warszewiczianum*
 (Reichenbach fil.) Garay (1979)
 – courtesy of Robert-Jan Quené
 and Orchids Limited





**Cedarvale
Orchids**

Specialist breeders of Australian
Native Orchid Species and Hybrids

**2014 CATALOGUE
NOW AVAILABLE**

See Website for Listing / Or Send SAE
 Visit us at upcoming shows
 (see website for venue details)

Ross & Rhonda Harvey
 16 Heather-Anne Drive, DRAPER QLD 4520
Telephone: (07) 3289 1953
 email: cedarvaleorchids@cedarvaleorchids.com
 AOR 171 website: www.cedarvaleorchids.com



Fig. 7. *Phragmipedium warszewiczianum* (Reichenbach fil.) Garay (1979) – courtesy of Robert-Jan Quené and Orchids Limited

The case of *Phragmipedium popowii*

But this, in turn, meant that the plant generally referred to as "*Phragmipedium warszewiczianum*" needed a new name and needed to be described properly. That was done by Braem, Öhlund and Quené in *Richardiana* (2004).

That same plant is also designated as *Phragmipedium humboldtii* by Atwood & Dressler (1998) and as *Phragmipedium warszewiczii* by Christenson (2006). As "*Phragmipedium humboldtii*" and "*Phragmipedium warszewiczii*" are invalid names, the correct name for this taxon is *Phragmipedium popowii* Braem, Öhlund & Quené.



Above:

Fig. 9. *Phragmipedium popowii* Braem et al. (2004)
– courtesy of Robert-Jan Quené and Orchids Limited



Left:

Fig. 8. *Phragmipedium popowii* Braem et al. (2004)
(as *Selenipedium caudatum* var. *giganteum*).
This is Plate 96 of the *Lindenia* (1886).

This plant has commonly but erroneously been designated as *Phragmipedium warszewiczianum*. As that name is no longer available (and thus cannot be validated), Braem, Öhlund and Quené named it as *Phragmipedium popowii* in 2004.



Left:
Fig. 10. *Phragmipedium popowii*
 Braem et al. (2004)
 – courtesy of Robert-Jan Quené
 and Orchids Limited

Below:
Fig.11. *Phragmipedium popowii*
 Braem et al. (2004)
 – courtesy of Olaf Gruß



Right:
Fig. 12. *Phragmipedium popowii* Braem, Öhlund & Quéné, *Richardiana* 4: 185 (2004).
 Synonyms: *Cypripedium caudatum* var. *roseum* Delchev. 1867;
Cypripedium caudatum var. *warszewiczii* (Rchb.f.) Kerch. 1894;
Phragmipedium humboldtii (Warsz. ex Rchb.f.) J.T.Atwood & Dressler 1998;
Phragmipedium exstaminodium subsp. *warszewiczii* Dressler 2005 and others.
 Photo courtesy of epidendra.org

LITERATURE CITED

Atwood, J.T. & Dressler, R.L. (1998). Clarifications and new combinations in the *Phragmipedium caudatum* complex from Central America. *Selbyana*, 19(2): 245-248.

Braem, G.J. & Öhlund, S. (2004). Une chausse-trappe linguistique: *Phragmipedium caudatum*, *Phrag. warszewiczianum*, *Phrag. humboldtii*. *Richardiana*, 4(4): 163-170.

Braem, G.J. & Öhlund, S. (2004). A language trap *Phragmipedium caudatum*, *Phrag. warszewiczianum*, *Phrag. humboldtii*. *Orquideología*, 23(2): 146-152.

Braem, G.J., Öhlund, S. & Quené, R.J. (2004). The real *Phragmipedium warszewiczianum* – A clarification of the *Phragmipedium caudatum* complex (*Phragmipedium* section *Phragmipedium*). *Orquideología*, 23(2): 117-136.

Castañón Ramírez, G., Hágsater, E., & Aguirre León, E. (1984). *Phragmipedium exstaminodum*: una nueva especie de Chiapas, México. *Orquídea* (Méx.), 9: 191-197.

Christenson, E.A. (2006). Das frühere *Phragmipedium caudatum* aus Panama. *Journal für den Orchideenfreund*, 13(2): 141-143.

Dressler, R.L. (2005). La Chinela, alive and well in Western Panama: notes on the Panamanian long-tailed *Phragmipedium*. *Orchid Digest*, 69: 86-91.

Dressler, R.L. & Williams, N.H. (1975). *Phragmipedium lindenii*. – *Taxon*, 24(4): 691.

Garay, L.A. (1979). The genus *Phragmipedium*. *Orchid Digest*, 43: 133-148.

Hooker, W. J. (1844). *Cypripedium caudatum* Lindl. *Icones Plantarum*: 658-659.

Linden, J.J. & Reichenbach, H.G. (1860). *Selenipedium caudatum*. *Pescatorea*.

Lindley, J. (1840). *Cypripedium caudatum* Lindley – *The Genera and Species of Orchidaceous Plants*, 7: 531.

Lindley, J. & Paxton, J. (1850) The long-tailed Lady'slipper (*Cypripedium caudatum*). *Paxton's Flower Garden*, tab. 9, pp. 37-40.

Populin, F. & Dressler, R.L. (2011). A nomenclatural note on *Cypripedium humboldtii* (Orchidaceae: Cypripedioideae). – *Harvard Papers in Botany*, 16(1): 167-169.

Populin, F. & Dressler, R.L. (2012). Von der Bedeutung einiger alter Namen bei *Phragmipedium* (Orchidaceae: Cypripedioideae), mit einigen Typisierungen. – *Die Orchidee*, 63(5): 383-393.

Reichenbach, H.G. (1852). Neue Orchideen der Expedition des Herrn J. de Warszewicz. *Botanische Zeitung*, 10(40): 689-698.

Reichenbach, H.G. (1873). *Selenipedium wallisii*. *Xenia Orchidacea*: Beiträge zur Kenntniss der Orchideen, 2: 189.

Rolfe, R.A. (1896). The *Cypripedium* Group. *Orchid Digest*, 4: 327-334.

Solano-Gómez, R. & Martínez-Ovando, E. (2011). *Phragmipedium warszewiczii*, a new record for the Mexican Orchid Flora. *Revista Mexicana de Biodiversidad*, 82: 69-75.



About the Author

Guido Jozef Braem was born 8 December 1944 in Ghent, Belgium. He has lived in Germany since May 1970. Married to the teacher Gudrun Braem, née Schluckebier. Studied Biology, English, and Art History at the University of Giessen (Justus Liebig University) and Ph.D. (Biology with a thesis about the taxonomy of *Tolumnia*) from the University of Newcastle upon Tyne (England). Full Professor of Biology for UMUC (University of Maryland University College).

He is the author of various books about orchids, carnivorous plants, and an extensive biography of Charles Darwin (available in English as eBook). Author of about 140 scientific articles (in *Orchids* (USA), *Die Orchidee* (Germany), *Orchid Digest* (USA), *Richardiana* (France); *SIDA* (USA), *Australian Orchid Review*, etc.) A new edition of his *Paphiopedilum* book (together with Guy Chiron and Sandy Öhlund) will be published as an eBook in April 2014.

Guido J. Braem
Naunheimer Str. 17, 35633
Lahnau Germany
Email: braem44@gmail.com

Ssh!

We all know that for every event there are the perennial late comers and so it is for the

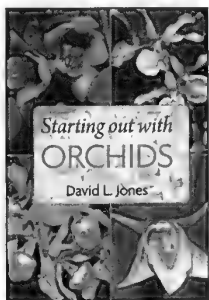
GRAND AFRICAN ORCHID SAFARI

where this is your very last chance to join this wonderful holiday tour so please contact

Easy Orchids on
02 6682 2635 or
sales@easyorchids.com

or Casino Travel Shoppe on
02 6662 6255 or
casino.travel@bigpond.com

Booking closes this month so do not miss out!



STARTING OUT WITH ORCHIDS

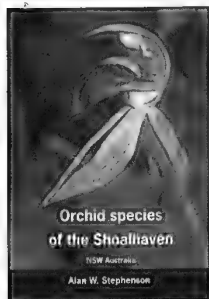
by David L. Jones

David Jones is arguably one of Australia's most prolific, precise and respected botanical and horticultural authors. The book is divided in two parts. Part One begins with the cultivation chapters, covering Easy Orchids for Beginners, General Cultivation Requirements, Growing Epiphytic Orchids, Growing Terrestrial Orchids, Orchid Pests and Diseases, Housing Your Orchids and Propagating Your Orchids. The information contained within these pages alone is required reading for all beginners through to experienced orchid growers. The text is very easy to read and understand with numerous sound cultivation tips and treatments discussed. There are many excellent and clear line illustrations that help describe terms or highlight diagnostic features. There are over 250 colour photographs.

Part Two discusses the orchids themselves with concise information on each species. They are grouped primarily according to climatic requirements, starting with cool growing orchids progressing to the warm growers, in alphabetical sequence first with terrestrial genera, followed by the epiphytes. Both Australian and exotic species are treated together. For each entry there is specific detailed information on each species, as well as a simple table giving the basic cultivation needs and flowering season. A glossary is also included to explain unfamiliar terms.

240 pages, colour.
210mm x 148mm.
Softcover.

OUR DISCOUNT PRICE \$A26.95 (Incl. GST)
was \$29.95 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



ORCHID SPECIES OF THE SHOALHAVEN: NSW Australia

by Alan W. Stephenson

Alan Stephenson lives in Nowra and is well placed to give the first botanical treatment of the native orchids of the Shoalhaven region. He has extended the distribution ranges of a number of uncommon and rare species, as well as discovering new taxa. This 68 page book is packed with both information and superb photography, almost exclusively taken by the author. All of the recorded orchid species native to the region are included and illustrated.

The introductory chapters discuss the area covered by this book, the structure of the orchid plants, their natural habitats, parts of an orchid flower, orchid structure and the pollination of orchids. This is followed by the main section of the book that alphabetically lists and discusses each species, with information such as Common Names, Recent Synonyms, Flowering Time in the wild, plus a brief description of the plant, flowers and preferred habitat. There are many terrestrial species fully covered as well as a number of epiphytic and lithophytic genera that are found in the area.

The quality of the printing and colour reproductions are sparkling. This is a wonderful field guide that will aid even the most novice naturalist or native orchid enthusiast and confidently assist them in identifying examples they encounter in the field. It represents excellent value, as it also covers many species found naturally along the East Coast of New South Wales.

68 pages,
225 colour photos.
210mm x 148mm.
Softcover.

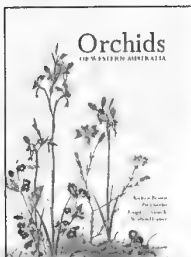
OUR DISCOUNT PRICE \$A19.95 (Incl. GST)
was \$25.00 RRP (Incl. GST) PLUS POSTAGE AND HANDLING

ORCHIDS OF WESTERN AUSTRALIA

by Andrew Brown, Pat Dundas,
Kingsley Dixon & Stephen Hopper

Written by three of Western Australia's most prominent orchidologists and featuring over 200 full-page, colour illustrations by renowned botanical artist Pat Dundas, *Orchids of Western Australia* is the first modern text cataloguing all 409 known species.

This comprehensive resource for hardened enthusiasts and initiates alike features a wealth of information in a single volume – from a detailed introduction to WA orchids to information on each species, including who named them, where they were first collected, their habitat, distribution, flowering period, size and distinguishing features. This book is the culmination of decades of work by WA's foremost experts, each dedicated to the conservation of one of the world's most important regional orchid floras.



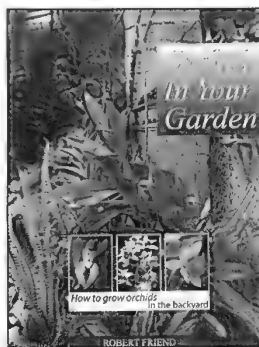
420 pages.
325mm x 245mm.
Hardcover.

OUR DISCOUNT PRICE \$A54.95 (Incl. GST)
was \$89.95 RRP (Incl. GST) PLUS POSTAGE AND HANDLING

The publishers of the
Australian Orchid Review
are pleased to offer readers popular
orchid books at special discount prices.

Just select the book(s) you require and
fill in the details on the form provided.

New titles will be added to the list when
they become available.



ORCHIDS IN YOUR GARDEN

How to grow orchids in the backyard
by Robert Friend

It sounds too good to be true, but orchids are as easy to grow in the backyard as a lawn or a bed of roses. Despite their exotic reputation, the everyday gardener can grow orchids without special pots or greenhouses.

The book shows you how to introduce orchids into the garden, by attaching them to trees, fixing them on rocks and walls, or planting them in garden beds. With more than 150,000 species and hybrids of orchids in the world, there are plants suitable for every garden.

144 pages.
Colour and B&W.

OUR DISCOUNT PRICE \$A19.95 (Incl. GST)
was \$22.50 RRP (Incl. GST) PLUS POSTAGE AND HANDLING

THE ALLURE OF ORCHIDS

by Mark A. Clements

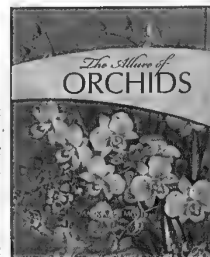
From 1788 when First Fleet artist George Raper painted *Diuris punctata*, the botanical world has been fascinated by Australian orchids. Hundreds of orchid images from the National Library of Australia's collection, with words by Mark Clements from the Australian National Herbarium in Canberra, make *The Allure of Orchids* a must-read for lovers of flowers, original paintings and our indigenous orchids. Many of these unique botanical illustrations are being showcased to a wider audience for the very first time.

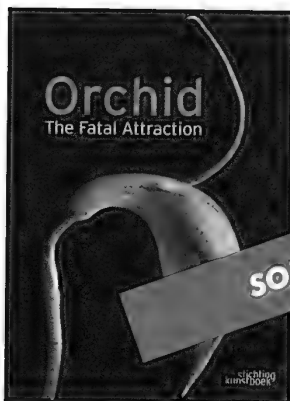
The Allure of Orchids features an essay by internationally recognised orchid expert Mark Clements, accompanied by a portfolio of illustrations, both historical and modern, of this alluring species. In it you will find works by around 25 artists, including the extraordinarily detailed lithographs of early botanical illustrator Ferdinand Bower, Ellis Rowan's beautiful paintings, the delicate watercolours of Margaret Cochrane Scott, and many more. *The Allure of Orchids* is divided into two parts; Terrestrial or ground orchids and Epiphytic or tree dwelling species. Clements says, "These illustrations can be enjoyed simply as works of art and part of our rich and colourful Australian illustrative heritage. But, significantly, they are also part of the scientific record of this country, particularly during the early exploration of the continent."

Interestingly, a lot of the old and traditional Latin botanical names have been used in this work. The author makes a significant number of anecdotal notes and comments throughout the book, to keep the reader fully informed. It is a "must have" book for those interested in Australian orchids and historical botanical art.

159 pages, colour.
284mm x 233mm.
Hardcover.

OUR DISCOUNT PRICE \$A34.95 (Incl. GST)
was \$39.99 RRP (Incl. GST) PLUS POSTAGE AND HANDLING





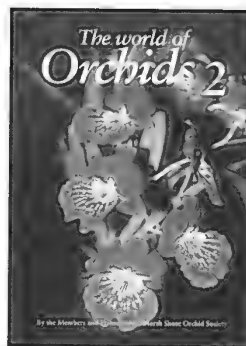
ORCHID: THE FATAL ATTRACTION by Anne Ronse

The subject of orchids is one close to the heart of many floral designers. Some feel it's a privilege to work with these flowers and plants but others wonder how many designers investigate the orchid rather than just grow them. The text by Dr Anne Ronse is informative and enthusiastic and the photography is superlative! It's so good that the flowers literally drip off the pages capturing the imagination and the heart. If you want something special, are addicted to orchids and want to luxuriate in glorious

text and images; this is the book for you.

142 pages.
Colour. Hardcover.

OUR DISCOUNT PRICE \$A59.95 (Incl. GST)
was \$85.00 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



THE WORLD OF ORCHIDS - 2

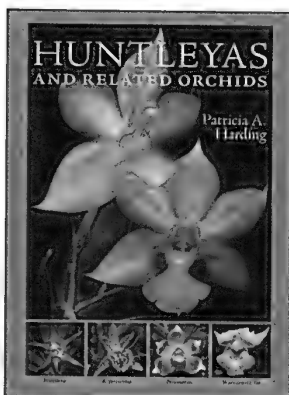
The World of Orchids - 2 has been written by members and friends of the North Shore Orchid Society about orchids grown in Sydney and its environs, and we are indebted to those people for their time and effort.

It has been produced to cover a large range of genera to help not only the novice, but also the experienced grower in their present fields of interest, and to tempt and encourage them to try other genera.

It should be pointed out that the methods of culture used by the authors are those which they themselves have found successful. Growers should try any changes to their own culture gradually and on a few plants first, as orchids respond differently under different conditions.

80 pages.
Colour and B&W.

OUR DISCOUNT PRICE \$A9.50 (Incl. GST)
was \$11.90 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



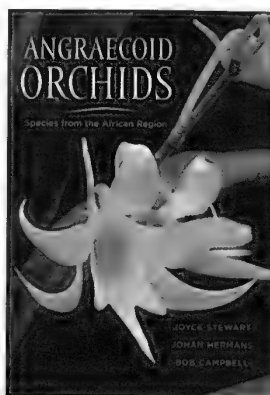
HUNTLEYNAS AND RELATED ORCHIDS by Patricia A. Harding

Revered by avid orchid collectors for its delightful, star-shaped flowers, *Huntleya* is a small group of orchids found low in the forest. *Huntleya* is a small orchid genus that includes fourteen species. They occur in wet cloud forests at medium altitudes of Guatemala, Costa Rica, South America down to Bolivia. The type species *Huntleya meleagris* also occurs in Trinidad. Besides their striking colours — from deep blue to waxy red, royal purple to almost black — flowers of this group are known for their distinctive shapes, patterns, and textures. As appealing as these lovely tropical orchids are, their identification has been

confused since the first species was described in the mid-1800s. Recent DNA studies have led to a clearer understanding of relationships and, as a result of this clarity, it is now possible to sort out the taxonomic problems and identify the characteristics that set species apart. In this first book devoted to the *Huntleya* alliance, author Patricia Harding presents evidence from the scientific literature, other growers, and her own experience that will enable orchid enthusiasts everywhere to identify their plants and grow them successfully. Patricia A. Harding is an accredited American Orchid Society judge who has been growing and photographing orchids for three decades.

260 pages, 150 colour photos. Hardcover.

OUR DISCOUNT PRICE \$A44.95 (Incl. GST)
was \$85.00 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



ANGRAECOID ORCHIDS: Species from the African Region

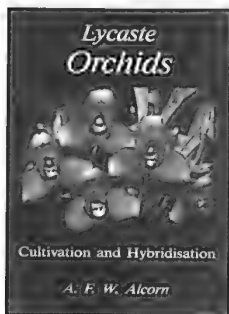
by Joyce Stewart,
Johan Hermans,
and Bob Campbell

These so-called 'Jewels of Africa' with their sparkling flowers, distinctive growth habit and floriferous nature are much prized and this account, the first to include the Angraecoid orchids of both Africa and Madagascar, is long awaited. It brings together, in a single volume, descriptions of all 690 species in this intriguing group of orchids and will be the essential reference for all Angraecoid orchid enthusiasts for years to come. Including such horticulturally

important genera as *Angraecum*, *Aeranthes*, *Aerangis* and *Jumellea*. Stewart, Herman and Campbell have all spent time in various parts of eastern and southern Africa and precise ecological information relating to habitat, altitude preferences and flowering season of individual plants will be particularly helpful to growers. The diagnostic features of each genus are illustrated and over half the species are accompanied by exquisite photographs taken in both wild habitats and in cultivation.

432 pages,
290 colour photos.
185mm x 265mm.
Hardcover.

OUR DISCOUNT PRICE \$A59.95 (Incl. GST)
was \$89.95 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



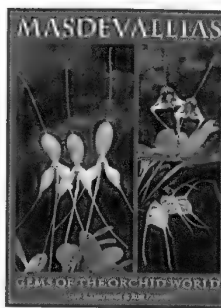
LYCASTE ORCHIDS - Cultivation and Hybridisation by A.F.W. Alcorn

Lycaste orchids are easy to grow, and they produce flowers that range from the beautiful to the bizarre. No book previously has provided detailed cultural requirements of the Lycaste, and this book should fill that gap, and encourage new growers to take up the cultivation of this beautiful genus. A section on hybridising contains valuable information on inheritance and genetics that will benefit any hybridiser, not just the grower of Lycastes, as well as helpful hints on how to avoid pitfalls in your hybridising program. Michael Hollett, a friend of

Fred Alcorn for a number of years, co-wrote this book with Fred and has completed it posthumously. He has a background in genetics, research and botany, and a passion for plants, especially orchids.

237 pages.
Colour and B&W.

OUR DISCOUNT PRICE \$A15.00 (Incl. GST)
was \$28.55 RRP (Incl. GST) PLUS POSTAGE AND HANDLING



MASDEVALLIAS: Gems of the Orchid World by Mary E. Gerritsen and Ron Parsons

For the species orchid enthusiast, cool to intermediate orchid grower, or anyone simply "mad about Masdevallias," this is a first complete reference to these collectible new world orchids. An inspiring tribute to their beauty and a practical guide to their care, the book offers detailed advice on all aspects of culture. For those enthusiasts who are up to a challenge, chapters on propagating, showing, and registering Masdevallias are also included. Ron Parsons is one of the finest nature photographers in the world and has an encyclopaedic knowledge of species orchids, with the genus *Masdevallia* being one of his favourites.

300 pages,
149 colour photos.
190mm x 255mm.
Hardcover.

OUR DISCOUNT PRICE \$A49.95 (Incl. GST)
was \$69.95 RRP (Incl. GST) PLUS POSTAGE AND HANDLING

CUT ALONG DOTTED LINES



(Payable to Australian Orchid Review)

Mastercard ☐

Visa ☐

PO Box 4812, North Rocks,
NSW 2151 Australia

0433 422 792

*Mr/Mrs/Ms

Signature

Address

sales@australianorchidreview.com.au

**PHONE AND EMAIL ORDERS
FOR CREDIT CARD USE ONLY**

Country

Postcode

Telephone ()

cut here for mail order bookshop

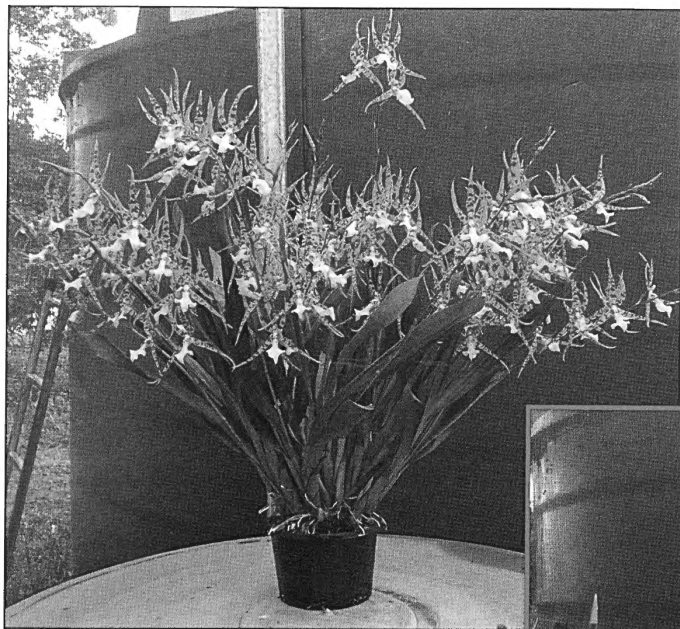
cut here for australian orchid review subscription

AFFIX
POSTAGE
STAMP
HERE

AUSTRALIAN ORCHID REVIEW
PO BOX 4812
NORTH ROCKS
NSW 2151 AUSTRALIA

Miltassia Golden Spider

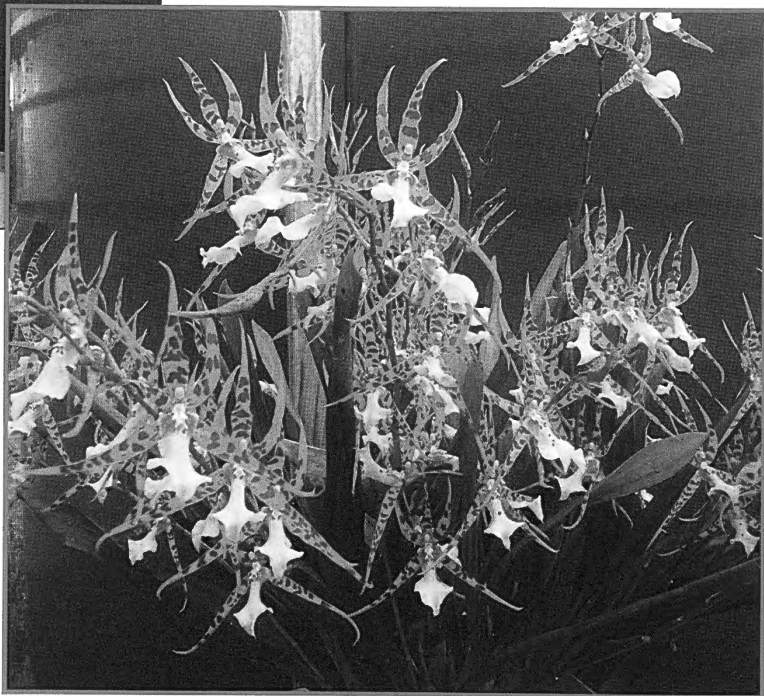
Text and photos by Sam Cowie



Miltassia Golden Spider 'Copius' is an intergeneric hybrid developed in Hawaii between the species *Miltonia clowesii* & *Brassia Starry Knight*. This is a spectacular orchid that produces an abundance of flowers on a vigorous robust plant. A vast improvement on a simple bunch of flowers. This is just one of the pot plant varieties we produce at our wholesale nursery. We specialise in easily grown and floriferous *Oncidium* intergenerics in a wide range of colours, shapes and styles.

Plants of this hybrid are now available from Tinonee Orchid Nursery.

Sam Cowie
Kin Kin, Queensland



RETINA AUSTRALIA *Retinitis pigmentosa (RP)*

is the major cause of youth blindness!
If you have RP, or know someone who has,
please contact the charity/support group

RETINA AUSTRALIA



FIGHTING BLINDNESS

For information and assistance phone

1800 999 870

www.retinaAustralia.com.au

AOR 025

"Nicky's Slippers"

One of the world's leading Paph. breeders.

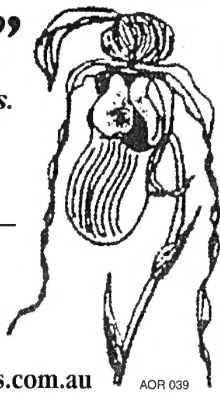
Exciting new Paphs. and Phrags.
now available.

Contact us for a copy of our colour catalogue –
send 3 x 60c stamps

NICKY ZURCHER

Box 326, Virginia, South Australia 5120

Phone/Fax (08) 8380 9360 Website www.nickyslippers.com.au



AOR 039

The Rock Lily Man

2013 Seedlings - All New - Now!

Your starting point for

Den. speciosum

Gerry Walsh: Grower & Breeder
Seedlings, Divisions, Information

www.therocklilyman.com

0247 77 4456

Australian Orchid Review

Editor:

David P. Banks
Email: david@hillsdistrictorchids.com

Address editorial to:

The Editor, Australian Orchid Review,
39 Carole Street, Seven Hills, NSW 2147 Australia
☎ (02) 9674 4720
Email: david@hillsdistrictorchids.com

To join an orchid society contact these secretaries

New South Wales

Veronica Clowes
P.O. Box 5396, Chullora NSW 2190
Phone: (02) 9649 2719
Email: secretaryosnsw@yahoo.com.au

Queensland

Maree Illingworth
P.O. Box 126BC, Brown Plains 4118
Phone: (07) 3800 3213
Email: r.millingworth@uq.net.au

Western Australia

Murray Baker
c/- 58 Gladstone Road, Leeming WA 6149
Phone: (08) 9310 2800
Email: murray.baker@inet.net.au

Victoria

Diane Sharam
1 Tynan Street, West Preston, 3072
Phone: (03) 9478 9764

Julie Forrest

Phone: (03) 5978 6045
Email: efo28308@bigpond.net.au

South Australia

Coralie Hills
G.P.O. Box 730, Adelaide 5001
Phone: (08) 8721 3213

Don Higgs

P.O. Box 134, Myponga SA 5202
Phone: (08) 8558 6247
Email: jhiggs@internode.on.net

Tasmania

Jan Dicker
G.P.O. Box 467, Hobart 7001
Phone: (03) 6247 9636
Email: jtdicker@bigpond.com

Northern Territory

Tammie Coyne
P.O. Box 38493, Winnellie 0821

To join a Cymbidium Club in your state, contact:

Cymbidium Club of Australia Inc.

Secretary, Judith Brooks
51 Chamberlain Road, Padstow Heights NSW 2211
Phone: (02) 9773 9197
Email: jahamilton.17@btinternet.com

The Cymbidium Orchid Society of Victoria Inc.

Secretary, Jennifer Robinson
54 Worthington Road, Devon Meadows VIC 3977
Phone: (03) 5998 2226

Cymbidium Orchid Club of South Australia Inc.

Secretary, Jeanne Hall
18 Coorilla Avenue, Glenelg North SA 5045
Phone: (08) 8294 5562

The Cymbidium Orchid Club of Western Australia Inc.

Secretary, Alice Lang
20 Urch Road, Kalamunda WA 6076
Phone: (08) 9257 1056

Publisher

HILLS ORCHID PUBLISHING PTY LIMITED
ABN 83 150 020 189

39 Carole Street, Seven Hills NSW 2147 Australia
Phone: 0433 422 792 or 0412 123 036

While the Proprietors of the *Australian Orchid Review* endeavour to assure the reliability of advertising and editorial, neither the Proprietor of the "Australian Orchid Review" nor the Editor can assume responsibility for the advice or transaction between advertisers and readers. The opinions and recommendations that may appear in this publication regarding the selection and use of specific plant-care products, including but not limited to pesticides, fungicides and herbicides, are those of the individual authors, and not those of the *Australian Orchid Review*, which neither adopts nor endorses such opinions and recommendations and disclaims all responsibility for them. When selecting and using such products, readers should seek and obtain the advice of the manufacturer and of responsible government departments.

ADVERTISERS INDEX

American Orchid Society	39
Aranbeem Orchids	39
Aussie Plant Tags	40
Aussie Shade & Hothouses	28
Australian Orchid Foundation	17
Burleigh Park Orchid Nursery	28
Cedarvale Orchids	54
C-Mac Industries (Aust.)	27
Dark Star Orchids	47
Easy Orchids	58
Hills District Orchids	IFC
Horticultural Courses	9
Keikigrow (Flora Laboratories)	48
Kiwi Orchid Bark	34
Mallee Phallies	23
Mingara Orchid Fair	40
Miriam Ann Orchids	27
Mount Beenak Orchids	13
Nicky's Slippers	63
Orchiata Pine Bark (Besgrow)	IBC
Orchid Pot Company, The	15
Orchid Species Plus	27
Orchidaceous Books	48
Orchidaceous Supplies	27
Orchids North	23
Red Diamond Design	15
Retina Australia	23, 63
Rock Lily Man, The	63
Tinonee Orchids	BC

Editorial copy:

Articles for publication and consideration should be sent to:
AOR Editor, David P. Banks, 39 Carole Street, Seven Hills, NSW 2147
Email: david@hillsdistrictorchids.com

All other correspondence to:

AOR Publisher, Hills Orchid Publishing Pty Ltd, PO Box 4812, North Rocks, NSW 2151
☎ 0433 422 792

Advertisers:

Deadline for advertising copy for the

June – July 2014 issue is Monday, 28 April, 2014

All advertising bookings and enquiries should be directed to:

Caitlin Hoolahan ☎ 0433 422 792 Fax: (02) 9221 4242 or

Email: sales@australianorchidreview.com.au or

David Banks ☎ 0412 123 036 Email: david@hillsdistrictorchids.com

Subscriptions:

See page 61 for Subscription information

2014 ORCHID EVENTS – What's on!

April 4-5 Castle Hill International Orchid Fair
– Sydney, NSW

April 12-13 Collector's Plant Fair
– Hawkesbury, NSW

April 26-27 Woodburn Orchid Society
– Workshop & Show, NSW

May 9-11 Mothers Day Weekend Spectacular
– Port Macquarie, NSW

May 16-18 Orchids Out West
– Hawkesbury, NSW

June 26-28 Parramatta & District Orchid Society
– Winston Hills Mall, NSW

June 28-29 Mingara Orchid Fair & Show
– NSW

July 5-6 Tinonee Orchids Open Day,
Workshop and Show – NSW

July 27 Hills District Orchids
– Winter Open Day – Northmead, NSW

August 2-3 Western Australian Orchid Society
– Workshop & Show – Perth, WA

August 15-17 St Ives Orchid Fair
– St Ives, NSW

August 22-24 Melbourne Orchid Spectacular
– Skye, Victoria

September 19-21 Tasmanian Orchid Society
Conference – Launceston, Tasmania

September 28 Hills District Orchids
– Spring Open Day – Northmead, NSW

October 3-5 Southern Orchid Spectacular
– Caringbah, NSW

October 23-25 Northern Rivers Orchid Species
Society – Lismore Shopping Centre, NSW

Australian
Orchid
Review



EXPOSED

Orchid growth in *Pinus radiata* bark



Comparative photo from Orchid growing substrate trial conducted at Lincoln University, New Zealand April, 2012.
(Photo unaltered)



Fresh Bark

There are several issues with **Fresh (un-aged) bark**, of particular concern for newly potted orchids:

PATHOGENS NOT KILLED

- some sources of fresh bark contain harmful pathogens
- bark is un-aged and pathogens are **not killed**
- pathogens can **spread easily** in fresh bark

PATHOGENS = HIGHER RISK

- **fewer beneficial microbes** to resist growth of pathogens
- pathogen growth **reduces beneficial microbe population**
- pathogens **greatly increase risk of disease** in plants
- **more cost and effort** to correct pathogenic growth

REPELS WATER

- natural waxes in fresh bark are **hydrophobic & repel water**
- fresh bark **does not** initially hold water & nutrients well
- **inferior delivery** of water & nutrients when first potted
- increased watering / nutrient requirement means **more cost**

pH TOO ACIDIC AND POOR CHEMICAL BALANCE

- fresh bark is **too acidic** for many orchid species
- requires **additional expense, time and effort** to correct pH
- plant phytotoxic compounds can **suppress plant growth**

Orchiata™ Aged Bark

Orchiata, **naturally aged bark** provides orchid growers significant growing benefits:

INHIBITS / KILLS PATHOGENS

- temperatures exceed 150°F during the aging process
- pathogens cannot grow and any present are **killed**
- natural colonies of beneficial micro-organisms flourish

BENEFICIAL MICRO-ORGANISMS RESIST PATHOGENS

- *Penicillium sp.* and *Trichoderma sp.* are just two of many beneficial microbes, that flourish during the aging process, that **prevent pathogen growth**
- Orchiata creates a **healthier environment** for plants

HOLDS & RELEASES WATER & NUTRIENTS

- aging removes waxes from surface of bark chip, allowing Orchiata to **hold water & nutrients** on outer surface
- aged surface provides **instant & consistent rewetting**
- excellent delivery of water & nutrients **from day one**

IDEAL pH AND CHEMICAL BALANCE

- Orchiata's **pH 5.5 - 6.5 is ideal** for most orchid varieties
- Ideal pH & low EC reduces need for additives or flushing
- **aging removes** growth suppressive compounds

Available from



Give your orchids the advantage of Orchiata's industry leading quality and performance, proven by award winning orchid growers around the world to be **best for consistently superior growth.**

Garden City Plastics
Tel: 1300 695 098
www.gardencityplastics.com

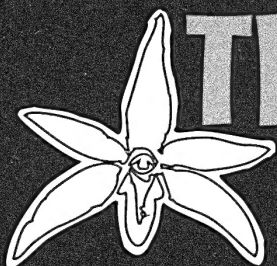
Melbourne, Sydney, Brisbane,
Adelaide, Perth, Hobart, Launceston.

Orchiata™

besgrow™

At the root of healthier plants.
www.besgrow.com





TINONEE ORCHIDS

Must be seen in 2014

2014 DIARY

Tinonee Orchids will be at the following shows and Orchid events.

- February 23 Hills District Orchids - Autumn Open Day
Mar 7-9 Queensland International Orchid Fair - Beenleigh
April 4-5 Castle Hill International Orchid Fair - Sydney
April 12-13 Collector's Plant Fair - Hawkesbury NSW
April 26-27 Woodburn Orchid Society - Workshop & Show
May 9-11 Mothers Day Weekend Spectacular - Port Macquarie
May 16-18 Orchids Out West - Hawkesbury NSW
June 28-29 Mingara Orchid Fair & Show
July 5-6 TINONEE ORCHIDS OPEN DAY & SHOW
July 27 Hills District Orchids - Winter Open Day
August 2-3 WA Orchid Society - Workshop & Show - Perth
August 8-10 National Orchid Extravaganza - Dural
August 15-17 St. Ives Orchid Fair
August 22-24 Melbourne Orchid Spectacular - Skye, Victoria
September 6-7 Speciosum Spectacular - Kempsey
September 19-21 Tasmanian Orchid Society - Conference
September 27-28 Plant Lovers Fair - Kariong
September 28 Hills District Orchids - Spring Open Day
October 3-5 Southern Orchid Spectacular - Cronulla
November 1-2 Gold Coast - Tweed Orchid Fair
December 7 Hills District Orchids - Summer Open Day

**Order
& pick
up**

TINONEE ORCHID NURSERY

768 Tinonee Road, Tinonee, 2430

Phone: (02) 6553 1012

www.tinoneeorchids.com

orchids@tinoneeorchids.com